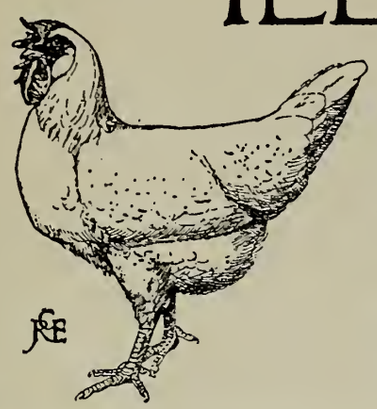
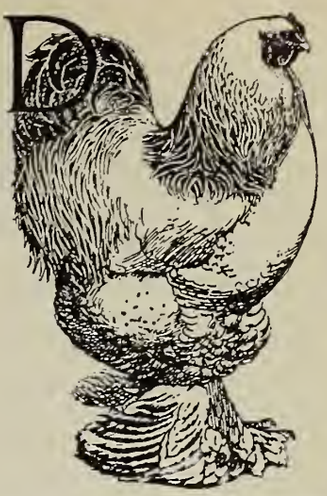
THE INTERNATIONAL MEETINGS.—A CANADIAN EXAMPLE. [Copyright.

One of the most progressive poultry plants in the world is that at the Agricultural College, Guelph, where Mr. Graham, the Canadian representative at the International Congress, is in charge. The photograph shows the complete range of poultry buildings, including incubator house, rearing sheds, etc.

THE ILLUSTRATED POULTRY RECORD





Vol. IV.—No. 10. July 1, 1912. Monthly, Price Sixpence.

DIARY OF THE MONTH.

EDITORIAL NOTICES.

Telegrams : "VIVACIDAD." Telephone : CITY, 2083.

The Editor will be glad to consider any MSS., photographs, or sketches submitted to him, but they should be accompanied by stamped addressed envelopes for return if unsuitable. In case of loss or injury he cannot hold himself responsible for MSS., photographs or sketches, and publication in the ILLUSTRATED POULTRY RECORD *can alone be taken as evidence of acceptance. The name and address of the owner should be placed on the back of all pictures and MSS. All rights of reproduction and translation are reserved.*

The Editor would like to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in difficulty regarding the management of their poultry, and accordingly no charge for answering such queries is made.

The Annual subscription to the ILLUSTRATED POULTRY RECORD *at home and abroad is 8s., including postage, except to Canada, in which case it is 7s. Cheques and P.O.O.'s should be made payable to the* ILLUSTRATED POULTRY RECORD.

Welcome.

In extending to those who will this month land upon our shore from other countries, some of them for the first time, to attend the meetings of the provisional committee of the International Association of Poultry Instructors and Investigators, a warm and hearty welcome, we are voicing the feelings of all who are associated with the poultry industry. One of these has already arrived, Professor W. R. Graham, B.Sc., of Guelph, Canada, who came in advance to study various aspects of our work in England, Ireland and Denmark, with a view to seeing how far these may be adapted in the Dominion. From the list which we print this month it will be evident that the Provincial Committee is very complete, nearly every country in which poultry-keeping is recognised as of importance having one or more representatives. Unfortunately all cannot attend, and some of those whom British poultry breeders would specially have wished to meet, are unable to be present by reason of distance or other circumstances, but it may be hoped this pleasure is only deferred. It is expected that twenty to twenty-five will attend. The gathering will thus be the most comprehensive poultry assemblage ever gathered, and we anticipate that the results will be great in the advancement of our industry. In recognition of its importance we are giving this month and next a considerable amount of space in connexion therewith, as this will mark the beginning of a new era for the poultry industry, by the bringing together of those to whom we must more and more look for dealing with the problems which must follow extension and increase of poultry breeding and production as an economic pursuit. The task of International

organisation and association is not without its difficulties, but with determination these can be overcome, and it may be expected that as a result of the meetings commencing on July 18th a great and powerful world-wide Society will be formed, embracing all who are engaged in poultry teaching and experimental work.

The Programme.

That the delegates have a busy time before them will be evident from the programme issued. The opening session will in its earlier stages be presided over by Lord Middleton, President of the Royal Agricultural Society, at which an address of welcome will be given by Lord Lucas, as representing the English Board of Agriculture and Fisheries. After this has been responded to and the first President formally elected, Mr. Edward Brown, F.L.S., will deliver his presidential address. This will be the only session open to the public, and for the next few days the delegates will be busily engaged in receiving reports of poultry instruction and investigation from nearly every country, and in laying the foundations of the Association on a broad, and, we hope, a firm basis. The agenda contains many items of considerable importance to the poultry industry as a whole, and will tax the wisdom and energies of those concerned. The time will not, however, be entirely devoted to work, for, as indicated by the programme, various functions have been arranged which will extend true English hospitality to our visitors, and afford opportunities of meeting such as may be invited with them, showing that the work in which they are engaged is receiving recognition from many who occupy positions of influence in this country. It is, we understand, expected that other expeditions to poultry establishments and centres will be arranged after the close of the sessions, so as to afford visitors an opportunity of seeing something of English poultry breeding and production.

Why not Poultry?

The announcement that the President of the Board of Agriculture has decided upon the formation of a horticultural branch of that body, will be hailed with satisfaction, not alone by those who are concerned with the pursuit thus to be served, but by all who wish to see progression all round. We warmly and heartily congratulate horticulturalists on this development, which should do much to advance and extend flower and fruit culture, the latter of which demands greater attention than has ever been given to it, specially in view of the growing consumption among all classes of the community, in which respect conditions are similar to those met with in eggs. The fact is these lighter articles of food will grow at an accelerated pace, and it is important that every encouragement should be given to their production. We may express the hope that the next step will be the forming of a similar branch for poultry, and if all those concerned would unite, to press upon the Minister of Agriculture that the opportunities are as great, and the needs as pressing in the last named industry, as in horticulture, it may fairly be anticipated that a similar response would be given. It is of interest in this connexion to show the relative importance of the two branches in so far as indicated by imports from abroad. The trade and navigation returns for 1911 tell that imported, raw fruit, jams and preserved fruits, and vegetables, which are growable in the United Kingdom, were in value £8,605,470, whereas eggs and poultry were £8,883,806. Thus the last named were at least £278,000 greater than the former, and that is probably a conservative estimate, as some of the fruits unenumerated may not be procurable in one climate. Therefore, we ask the question "Why not Poultry?"

The next British Laying Competition.

It is satisfactory to note, as we announced in our last issue, that the work of the Utility Poultry Club, which for many years has conducted the Laying Competitions practically unaided, has received recognition, and that the substantial sum of £500 has been allocated by the development commissioners for a twelve months' competition, to commence in October next. Upon the result of its application the club is to be warmly congratulated, as also the tribute thus paid to its earnest and self-denying labours, which have contributed greatly to the promotion of practical poultry breeding in this country. With this amount of money at command, the forthcoming competition, which will be held at the Harper Adams College, Newport, Salop, should be on a scale never before possible, and embody features which have hitherto been out of reach by reason of the expense. Something more, however, is required than a mere repetition on a larger and longer scale, of previous contests, and we hope that a scheme may be adopted which will make it the most valuable laying competition yet held. Unfortunately the time at command to make arrangements is short, but doubtless the Utility Poultry Club committee have already the details well in hand in anticipation of this grant. It may be hoped that the prizes and awards will not go exclusively to the extremist layers, but that all pens which reach a stated average, say 180 marketable eggs in the twelve months, and well distributed throughout the year, will receive either a prize or a certificate. Of even greater

importance is it that the competition shall be continued to a second year, and that the more important prizes shall go to those birds which make the best records over what may be termed the full duration of laying.

Poultry Instruction in Schools.

It will be remembered that in the February issue of the *Poultry Record* (page 198), an account was given of the teaching of poultry at a Cornish rural school, which it may be hoped is but the beginning of this class of instruction. It is interesting to note that in the *Reliable Poultry Journal* a report is published of the work of Mr. E. N. Hopkins, of Fort Smith, in the State of Arkansas, who is devoting himself to the advocacy of poultry teaching in the public schools, both town and country, in that and the adjoining States of the Union. His efforts are meeting with considerable success, and have received the endorsement of public bodies and influential individuals. The object is to awaken in the young people a love for animal life and interest them by practical demonstration and work. What has already been proved by Mr. Blewitt at Lanlivery is capable of reproduction everywhere.

Why Kill Old Hens ?

Hitherto it has been generally accepted that hens must be disposed of before reaching their third year. But every poultry keeper, it seems, is not of that way of thinking. Mrs. Wilkins writes to the "Vegetarian Messenger," expressing the hope that her experience of over 25 years in keeping a few hens may encourage others to let these useful members of bird life live out their natural lives in peace, and I may truly say, usefulness. She says she has " kept a strict account of cost and return from eggs, and always found there has been a profit, and yet never has a hen been killed; they always have been let pass out of this life naturally as a fading flower." "People often say (she goes on) Oh, but don't they get diseases? I have not found they do though in some cases they have lived ten and twelve years, and the passing away has been in this way: I have seen them all out feeding and looking quite well, and then in several instances, perhaps a few hours later, have gone out and found an aged friend lying dead, seemingly without having had any special pain or illness."

The Parcels Post.

Many people have been surprised to find that the old country is more advanced in one respect than the United States, in that we have a long established parcels post, whereas a Bill proposing a similar service has recently been defeated in the Senate at Washington, the vested interest of what are called the Express Companies being too powerful for the progressives. We cannot, however, crow over our transatlantic friends, who can point out that they have postal privileges for publications we do not possess, which have been denied to us by the influence of the great distributive agencies. It is possible, however, that a parcel post would be of greater value to American agricultural producers than it has been here, by reason of the greater distances to be traversed and the wider distribution of farmers in that country. Here it has not proved nearly so valuable for agriculturalists in direct trading as was anticipated, though it is employed to a modest extent, more especially for longer distance trade. We have a uniform charge as for letters. A package is conveyed from Cork to Edinburgh at the same rate as from Heathfield to Hampstead. That was not found possible in America, where the proposed charge would have varied from 1d. per lb. up to 50 miles, to 6d. per lb. over 2,000 miles. The last named would be prohibitive save for the most expensive goods, and that is the reason why farm products are usually sent in bulk and through the ordinary channels of trade. The parcels post has, however, been a valuable competitive factor.

What of the Turkey ?

When the results of the last poultry census are published it will be deeply interesting to learn what is the relative position of Turkeys and other domestic fowls. In spite of all the efforts put forth to increase the number of these birds the signs are that very little has been accomplished, although we do not anticipate that there has been a decline such as that reported from America, not alone in Rhode Island and Connecticut as a result of disease, but over the Western States where is an abundance of space. Exchanges report that the 1910 census in the United States reveals the fact that Turkeys had fallen from 6,594,695 in 1900 to 3,688,688 in 1910. Texas retains her place as the leading turkey producing state, but her crop fell from 648,671 in 1900, to 363,666 in 1910, and a similar decline is indicated in other parts of the middle West, whilst in the East some districts once famous have been reduced to a few thousand birds. Such is one of the penalties of ultra domestication. It is, however a serious question, for shortage of supply and rising prices mean that probably ere long America will be importing turkeys for thanksgiving and so reduce our supplies. There is all the more need, therefore, that every effort shall be put forth to increase turkey breeding in the United Kingdom, within many parts of which much could be done in this way. There are few farms of

200 acres and upwards whereon 50 and 100 of of these birds could not be profitably raised every year. Smaller farms are not so suitable for this work.

Western success in the East.

The name of Devereux, of Shepherd's Market, Mayfair, is well known in London business circles, and his old-established business as a poulterer was one of the best in the West End, dealing with many of the great houses in that section of the Metropolis. Some time ago he stated his intention to retire, which has been carried out, and his fine connexion has passed into other hands. That in itself is of interest, but even more is the fact that he is now on his way to New Zealand where he intends to settle, and, possibly, to take up work again in that colony. The advent of anyone of the experience of Mr. Devereux should be a great gain to New Zealand, and if use is made of his knowledge, more especially in connexion with the export trade, the result cannot fail to be great. His knowledge of the requirements of the English markets should be invaluable in his new home, and he may be commended to our colonial friends.

The value of oats.

Chemistry can teach us much, but there is a factor which cannot be determined in the laboratory, namely, palatibility and digestibility. A food may be excellent so far as its constituent elements are concerned, yet be of comparatively small value either because it is in a form which makes it difficult to assimilate or does not appeal to the palate of the fowl. We are led to these observations by letters appearing in one of our weekly contemporaries, in some of which oats are condemned and in others praised for egg-production. That this grain is one of the best balanced for poultry feeding we have is evident, though probably it is more useful for chicken rearing and fattening than as an egg producer, on account of the amount of fat it contains. There are, however, oats and oats, and it is almost entirely a question of husk in relation to kernel. The small, rounder, thin skinned foreign samples can be easily digested, but the thin oats in which the husk occupies the greater part cannot be dealt with by the organs and pass from the body more or less whole. That is why oats are generally crushed when fed to horses.

HUNGARIAN GEESE. [Copyright.

Throughout Southern Europe the descendants of the old Roman goose are in evidence everywhere. These are usually white, but are much smaller than the Embden.

PERSONAL LETTERS FROM AN OLD FANCIER.*

V.—To a Country Poultry Instructor.

Dear Mr. Bolder.—You did not see me at your Northmoor Meeting the other night, or know that I was present. Possibly you are glad that such was the case, It would have been unfair to you. Not that I pretend to any special right to criticise you or what you said, but it is disconcerting to a beginner to find an old hand among his auditors. Speaking to strangers is always easier than to those you know, or who know you. "A man is not without honour save in his own country" is as true to day as when first uttered. I do not say it is undesirable for a critic to be present, for that may be helpful, only some folks are merely fault finders. They like to pick holes, and give no credit for what is done well. When you get a wife let her now and again come to hear you, and if she is worth anything, every time it will do you good. We men would be much worse than is the case if it were not that we are constantly trying to live up to the ideals we want the other sex to form of us. The moment anyone gets careless of what his wife thinks his moral development is arrested.

However, that is by the way. The advantage of being small in stature is that one can hide behind a bigger fellow. That is what I did, only my ears were all there.

Let me say at once that you did remarkably well, better than what I expected. One has suffered a good deal from the mannerisms, the bumptiousness, the inanities, and the, shall I say, ignorance of young men and maidens sent out by county authorities, some of whom reminded me of a cockerel trying to crow, or a young ass learning to bray, that it was a pleasure to find one of a higher type, who did know a little of what he was talking. Do not mistake me. You must not imagine from what I have truthfully said that you are perfect, for you have a good deal to learn. The point is whether you are willing to do so.

Some there are who could be named that started well, but because they were asked to a few big houses to tea or to sleep, or had a local magnate or two to preside for them, and who from sheer want of knowledge of the subject praised them more than their deserts, lost their heads, not only becoming insufferably vain and cheeky, but destroyed their opportunities of doing good work. Try and avoid that—keep humble. As soon as you begin to feel sure of yourself it is time to look out. It is said that the great orator, John Bright, never made a public speech without being for hours before nervous in the extreme. Your responsibility is as great as his within your own sphere.

There are several classes of county lecturers I have met with.

One is the man or woman who looks upon it merely as a job, for which they are paid so much money. Their knowledge and experience is bounded by the extent necessary to enable them to secure and retain the appointment. All the time they wish it was over, and that they could escape without loosing the fees. These are parasitic hirelings.

Then there are such as really try to render faithful service, failing either through incapacity for grasping their subject, or for conveying what they know to their hearers. For these I ever have a profound sympathy. One or two of the best teachers at the present time were at first in this class, but have persevered and conquered. Usually these are helpful because humble.

Next are the self satisfied, conceited lecturers, who sometimes know little but use that for all they are worth, and impress by their volubility; or who know a great deal and take care that everyone else shall know that they do know, for they tell it all the time. It used to be said of a celebrated politician that when he was going to make a big speech the newspapers had to buy a new fount of the capital letter "I." These men and women would enormously enhance their influence if they could forget themselves.

The last class, in which I hope you may be found, have studied as far as possible the subject in its various aspects, yet are conscious of how small is their knowledge, whilst willing to impart that to their hearers, ever ready to learn from anyone and anywhere. They endeavour to understand the position of those whom it is their business to teach, eschew rhetorics and flummeries of that kind, making what they say as plain and understandable as possible. Realising how little they know and how wide is the limit, if there be one, of the subject, they are at school all the time, seeking by added experience to make themselves more useful.

It is an easy thing to get up a lecture. You have only to buy a text book, make selections therefrom, read or recite this off in a glib fashion, and the thing is done! So some say. But, is it? Unless what you have to say is part of yourself, which you can emphasise according

* The previous letters have been: No. I., "To a Young Judge," March, 1912; No. II., "To a Show Secretary," April, 1912; No. 3, "To a Lady Poultry Farmer," May, 1912; No, 4, "To a Disappointed Exhibitor," June, 1912. The next will be addressed "To a Specialist Poultry-Breeder," and appear in our August issue.—EDITOR.

to experience rather than elocutionary standards, it will do no good to anyone, be merely so much wastage of words, of which there are plenty without your adding to the total. A Russian writer has said, "you can only appeal to souls through your own soul," which is true even of poultry lectures.

What you have to do is to convince hearers that you are in earnest, believing absolutely what is said, as the first step in teaching. Then there is a chance of impressing those who come to listen to you. They honour you by coming. Honour yourself and them by giving the best you can.

I do not suggest, however, that books may not help you, in fact, you cannot do without them. What you have learnt are merely the rudiments of the question, and every day you want to grasp some little more of its meanings. The successful teacher must be himself a student and a practician, adding to both theory and practice whenever and however possible. Poultry husbandry is growing rapidly, knowledge is accumulating fast, and you must be abreast of every development. It is what you give those who listen to you will receive, nothing more. The words are merely vehicles.

I have said it is easy to get up a lecture. Some I have heard were merely copied from others or from books. In the former case even gestures were imitated. That imitation is the sincerest flattery may be true, but this will serve no useful purpose. Cull your knowledge and ideas wherever you can, digesting these, giving forth in your own way, and clothing them in your own words. There is no copyright in ideas, only in their expression and form.

A story is told of a young curate which well illustrates my meaning. He had to preach at a somewhat important church, and for the life of him could not prepare a decent sermon fit for the occasion. So he boldly copied one from a published book by a well known Archbishop. All went well, but to his horror when the service was well nigh over he saw the Archbishop in the congregation. He waited in fear and trembling expecting to be denounced for his plagarism by the prelate, who, to the curate's surprise, clapped him on the shoulder, and said, "Ah my young friend, I see we have both been at the same source of inspiration." The Archbishop had stolen it in the first place from an older Divine! That sort of thing may do in the Church, but it will not wash in poultry-keeping.

Once I was with a party going through Westminster Abbey. The Verger had recited his description of a certain tomb, when he was reminded that a famous Canon had told a different tale, he replied, "A Canon may perhaps make that statement, but I should not undertake the responsibility of it." Mental digestion is necessary to successful instruction.

It is not the mere lecturing which is the difficulty. Yet in that respect you require to be sure of what you are saying, otherwise it is easy to get mixed. Some there are who like to use a magic lantern, which may serve a valuable purpose, in that it educates by the eye as well as the ear. Try to describe a Rhode Island Red to such as have never seen one. To convey a right impression is hardly possible, whereas a lantern slide will make it easy. I have met lecturers who preferred the dark, as they could not see their audience or be seen by them. It is all a matter of temperament. In that case do not fail to have your slides in order.

One instructor, well able to teach manual practice but who knew nothing of breeds or breeding, "got up" and "got off" a lecture, which was rattled off glibly. But two of the slides were transposed. The good lady went on according to her lesson. A voice, however, came from the audience, "Mistress, you've got the wrong picture." I was sorry for her, as the explanation was evident, although she was at fault.

Nearly everybody thinks he can lecture. Nothing that I know is harder, unless you really understand what you are talking about. When you do that then it is not at all difficult, provided that you are able to convey your facts to those who listen. It is not what other people say but what you think. When you desire to express the views of someone else, frankly state you are doing so. Your own position will be strengthened thereby, and your self respect maintained.

I could tell many instances of slips made by assumption of knowledge not possessed. And, further, be clear in your enunciation and simple in your sentences. Often much is lost by clothing thoughts in a multitude of words which convey no meaning to those who listen. Stand easily and squarely. You have seen school girls reciting their "piece," with hands behind their backs, chins elevated, and eyes fixed on a given point. I have heard lecturers who looked like trussed chickens, and had no more animation than a brazen image. Also, be careful in similies and illustrations. It is told of a builder called upon for a speech, who commenced by saying he "was more suited to a scaffold than a platform."

Your success will largely depend upon your personality. Therefore, what you want first of

all to do is to get into immediate touch with your hearers, so as to learn how much they know and what are their special conditions. Then you may have some hope of helping them. Your business is not merely to repeat what they are familiar with, but, as far as may be, to show them what others are doing, and how they may improve their methods, not as a question of theory but what has elsewhere been accomplished.

On the other hand, it is a waste of effort and of money talking to them about the aspects of poultry-keeping absolutely beyond their reach. To lecture about duck farming among the guiding on to broader lines, is where a poultry instructor will exert his widest influence.

One thing to remember is, be sure of your facts. There was one place in your address where I could see you were talking beyond your knowledge. Probably others felt the same. It is essential that you should know more of the subject than the majority of your hearers, but make no pretence of a pseudo-scientism which is not there. If you do someone will sooner or later trip you up, and deservedly so.

Your business is to give proved knowledge, not to promulgate untried and untested theories. Use your hands as well as your tongue. Once

WHITE MAGYAR FOWLS. [Copyright.

As in the case of geese, Hungary owes her native fowls to Italy, and these birds are closely related to the Leghorn.

miners of South Wales, of about Turkey breeding to Yorkshire artisans, is more than misplayed energy, it is mockery in the extreme. These people can do some things. Teach them within their limitations. Think primarily of the younger folk. Most of all can be done with them, and if you go rightly about your work the future will tell its tale. We who are more advanced in years do not readily absorb new ideas or change our methods.

A day spent in going among the people, in telling where they might improve, in showing at small cost things might be better, and in show that you can do things, even to making a coop, killing a fowl, or testing an egg, simple though these are, and your reputation will be enhanced enormously, your influence be increased.

Nor must you be afraid to speak strongly when you know you are on safe ground. There is a saying, "if you want to enjoy the salad, you should never omit the vinegar." Recently I heard of an instructor giving an address to farmers on a market day. He was condemning emphatically the all too common practice of mixing eggs and selling these as

country produce. Nor did he mince his words. An old man in the audience, who had evidently imbibed somewhat freely, half rose from his seat and said, "How the———do you know I do that?" The effect was profound, worth more in the district than a thousand posters. It showed that the teacher knew what he was talking about, and that his lessons struck home.

It is question time which will test you, and for that you must be prepared. The mere hireling whose equipment and qualifications are meagre in the extreme can soon be found out. But for the earnest instructor questions should ever be welcomed, as they reveal much that it is important for him to know. He can often help a score hearers by the reply to one such query. To do this you must cultivate the capacity of thinking on your feet, and quickly. That is not given to all. One of the best conversationalists I ever met could scarce utter a dozen words if he had to stand and say them. But such a faculty is essential. Take time to think, but answer concisely. Only actual knowledge will enable you to be consistent. Otherwise you will soon contradict yourself. You will find sometimes traps set for you. There are hecklers at poultry lectures, whose object is often to find out how little you know. Never be afraid to say you are unable to answer a question. That is better than bungling or making a pretence.

The consciencelessness of some public authorities in respect to remuneration of instructors is often a scandal. You must fight against it for all you are worth. If these think poultry-keeping of no moment and pay as if anyone can undertake the work, refuse to be a party to it. Keep up the dignity of your position, but do not put on airs—or hairs. Long haired men and short haired women are neither "fish, flesh, fowl or good red herring." Whenever I see a young fellow begin to part his hair in the middle, I wonder what size corsets he will wear. A man I knew lost the chance of a good appointment because he appeared in a top hat and frock coat. He was thought to be too much of a swell.

On the other hand remember whom you represent as well as yourself. A lecturer told me that she was invited to tea at a big house, but they sent her to have it with the maid servants. She walked out, and rightly so, not that she regarded herself as superior to the servants but that it was an insult to her position. Happily such instances are rare. Rather will it be that hospitality will be too profuse. You will find kindness everywhere. I am not sure that it is not better to be somewhat chary in acceptances. To gracefully ask to be excused is often a wise policy. Never give the impression that you are a sponge.

Assumption of any name or designation beyond what you have a right to is a mistake. There are people who fling the title "Professor" about recklessly, and others who preen themselves when so called. Upon this point there can be no mistake. Barbers and quacks, and even vendors of poultry appliances, may so dub themselves, but you want to take a higher standard of ethics. Any man who assumes such a title, or any other, without qualification is a charlatan, and we want to keep poultry clear of these. If your own name is not good enough then there is something wanting in yourself. Only those have a right to take the professional distinction who have it conferred upon them by a recognised institution because they are elected to a defined position. Such we can honour, but no one else. You can buy a Doctorate cheap in America. What would it be worth?

One more question I want you to consider. The meanness of public authorities has led to the appointment of instructors on such terms that they could not live. There should be a minimum wage for many others than miners. As a consequence we find lecturers touting for orders, selling birds or eggs or poultry houses or other appliances, I pray you descend not to that depth. Keep clear of all such trading. Then you will be independant and free. Your teaching will have ten-fold more influence if everyone recognises that you are impartial in all you say. I know the blame is more that of the employers than the employed. The latter should refuse to be a party to such a system.

To anyone in your position the responsibility is very great, and the consciousness of that fact should ever be present. Think what it means. To an extent greater perhaps than you imagine, the future of Poultry-keeping within your sphere of labour may be determined by the faithfulness with which you accomplish your task, and the influence you can personally exert upon those among whom your lot is cast. If you fail to do this, blame not others but yourself. It will alone be by earnestness of purpose, by zealousness of endeavour, by steady progress in outlook and knowledge, that you can hope to succeed. But it is given to you the moulding of many lives in this direction. The rewards as a result of faithful service will be great, not in money, for that is the least of all, and in any case comparatively little, but in adding to the well-being of your fellows. Such payment, although it will not alone keep the pot boiling, is a remuneration higher than coin of the realm. Still "a labourer is worthy of his hire," and you must not cheapen yourself, but insist upon an adequate recompense, if not for your own sake for that of others.

Yours hopefully, ENOS MALPAS.

THE INVISIBLE CHICKEN.

Fifth Article. THE NINE DAYS' WONDER.

Written and illustrated by James Scott.

FOLLOWING up my investigations into the appearance of the normally invisible chicken, I break open an egg of nine days' incubation, and drop its contents into a shallow glass jar. They then appear as depicted in Fig. 1. The creature is by this time fairly well developed, and the limbs especially are strikingly noticeable. It is surrounded by the crimson veined wrapper, which spreads out widely and floats on top (or near the top) of the surrounding fluid. The vessels of this sheath supply the embryo with

Fig. 1.—Top view of a small glass jar into which the contents of a nine days' incubated chicken have been dropped. Nearly life-size. [Copyright.

the blood that its nuclei manufacture out of the yolk oil, albumen, etc. In a sense many of these vessels get absorbed into the body as the latter expands until it reaches the confines of the shell. This part of the subject will be treated of in a separate chapter.

It is while we examine such a curious little object as this nine days' chicken, that we can excuse our forefathers from believing that the germ of a chicken was almost a model of the fully grown specimen. Going backwards from a newly hatched chicken, or dealing with a series ranging from the twenty-first to the first days, we can see that the gradually dwindling chicken *does* resemble its mature form. Down to quite small dimensions the outline of a chicken is perceptible; so that even scientists might come to the conclusion that beyond our visible opportunities the embryo still retained its characteristic outline to some extent; but as I have shown in earlier chapters, during the larger part of the first week of development the young chicken varies considerably from the usual and familiar appearance.

The nutriment in which the ninth day embryo reposes is still a compound of a very thin yellow fluid, in a bag surrounded by separating layers of slime or albumen. The yolk oil shows the usual dense clusters of tiny globules. Considering that the yolk is an oil, it is curious that these globules do not run together and compose one large sphere or layer. We all know that if several separate drops of ordinary oil of any kind are allowed to run together they will coalesce into one large ball or else (if they have the chance) make an undivided fluid. It should be remembered that the ball of yolk in an egg is not a single sphere; but consists of myriads of small drops suspended together, all enclosed by a thin fibrous skin.

I presume that the medium in which these tiny globules occur, prevents their amalgamation into one mass; and so, by keeping the nutriment minutely subdivided renders it easier for modification and assimilation.

While studying this and the successive stages of the development the curious twisting of the body becomes very evident. Just before hatching, the chicken is folded up in a quite remarkable manner. Its head and tail almost touch, and the neck is twisted to allow this remarkable, compact attitude to be adopted. It reminds me of the way in which an acrobatic contortionist will sometimes tuck his body and limbs in between one another, and occupy a tiny box meantime. Anyone who observes a chicken soon after it has hatched must be impressed by the apparent smallness and meagre accommodation of the shell whence it has issued. It would be a difficult matter to replace the chicken in the egg, and seal it up in its original state.

In the illustration, Fig. 1, the relief of the tension due to the breaking of the egg-shell, enables the embryo to extend itself into a more open position than it is found in before being tampered with.

The skin of the embryo is at this period very well differentiated, and strongly resembles what is commonly called "goose-skin." Tiny swellings—the new hair feathers—stand up all over it in a regular manner. The back, or dorsal area, is much better supplied in this way than the under, or ventral parts. This condition would be expected, when we bear in mind the final appearance of the chicken.

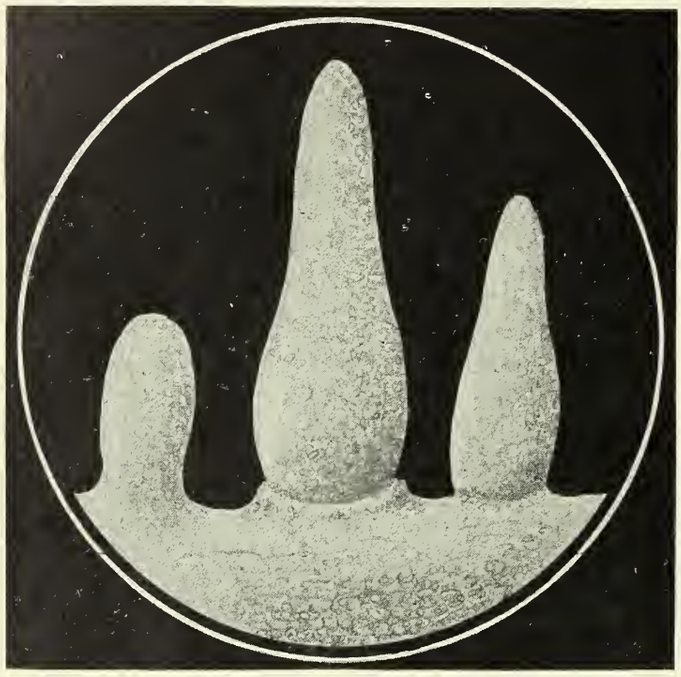


Fig. 2.—Some of the swellings on the skin of the embryo chicken greatly magnified. These are the commencement of hairs, which later become feathers.
[Copyright.

The point to be especially noticed is that the "pimple like" elevations are arranged in very symetrical rows, like the buttons in a piece of padded upholstery. Whether we follow their course lengthways, crossways, or diagonally, we shall always find that one comes behind, or just in front of another (and consequently between its neighbours) in a very neat and precise manner. The hairs on our own bodies grow on much the same plan. Some newly forming hairs are shown in Fig. 2.

The arms and legs of the nine days' embryo are very prominent, and close observation will reveal that the middle finger of the hand has lengthened more than the other two. In Fig. 3 some idea of arms and legs are given. These parts will be more fully described in a chapter devoted to wing growth, but it should now be stated that this long finger, which corresponds with our own index or forefinger, is the one chiefly concerned with feather bearing.

The hind limbs, or legs, and their adjuncts have a strange aspect. The pimply flesh around and above each thigh is so well contrasted with the nakedness of the joints, that it looks as though the legs were clothed in very short knickerbockers. Indeed, in some ways, it seems that a hind pair of wings were about to be formed above the thigh, partly embracing them. Something similar is observable in the reconstructed Archæopteryx, a fossil reptile-bird, that I have frequently had cause to mention—but in this case the apparent hind wing is really a portion of the forewing folded under in a peculiar manner.

To the layman the resemblance in appearance between these two sets of limbs must be quite surprising. We should expect to see in a human embryo, and in that of an ape or monkey, and so on, arms and hands, but the idea of a bird is so firmly fixed in most men's minds that it needs some emphasis, occasionally, to persuade them that unborn birds—even those which they are turning into profitable poultry—have definite arms and hands. Certainly no greater contrast could be found, than is obtainable by comparing the object depicted in Fig. 1, and the same creature a few weeks later.

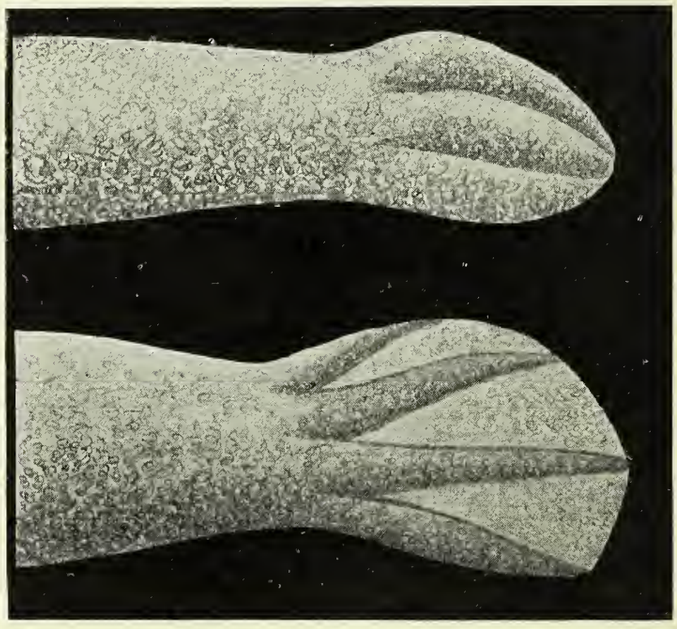


Fig. 3.—Greatly magnified wrist and hand (which becomes a wing) and foot of a young embryo chicken. These are actually ¼ inch long; and are very soft.
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The eyes of the embryo are still large in proportion with the remainder of the body. Around the rim of each exists a row of several dots or points, to which I may find it necessary to return in a later chapter. A very prominent feature of the eye is its nictating membrane. Birds possess a kind of skin-fold tucked away in the corner of the eye. This can, when perfect, be spread out like a curtain right across

the ball, and so cleanse off any specks of dust, or shield the important organ from sudden danger and bright light. It can be swept across the eye, and back in a fraction of time—so swiftly, indeed, as to escape the notice of most observers. In a later chapter, this feature is displayed just as I found it.

The ears are other organs that attract attention to themselves. They are like large holes, bearing in mind the entire dimensions of the embryo. Although ears are not visible either in chickens or mature fowls the presence of these large cavities proves that they are well endowed with the sense of hearing. When we consider the singing of small birds, the crowing of cocks, the cackling of hens, the chirping of chickens, the screeching of owls, and the chattering of parrots, it becomes obvious that Nature would hardly endow creatures with such resounding powers unless it also provided the corresponding one of hearing.

The beak at this stage has become very strongly pronounced, though it is still pink and soft. Its curves are beautifully made. The egg-tooth on the outer tip of the upper half of the beak is very noticeable. This will receive detailed attention later on. When the beak is carefully opened the small fleshy tongue is disclosed as a very well defined object.

As I shall show in subsequent chapters, from this stage onward some astounding changes occur in the embryo.

THREE TYPES OF GERMAN POULTRY HOUSES.

By Wil Brown.

Chief of the Department of Poultry Husbandry, West of Scotland Agricultural College.

TO-DAY the German poultry industry is in its infancy, but knowing something of the racial characteristics of the Germans I have no hesitation in saying that its growth will be rapid. As is the case in this country, it was only a despised by-product yesterday, but it is a growing industry to-day, and I am sure that it will become a national asset to-morrow. Much, however, requires to be done before it is placed on a sound basis.

German farmers and small holders do keep fowls, but the flocks are kept around the homesteads, accommodated in one of the ordinary buildings. As yet it appears that but few have realised the many advantages of scattering the fowls over the land, and, until these are appreciated, little advancement is likely to be made towards increased production. It is a fact that in Great Britain the necessary impetus was given to the industry by the introduction of the portable house. Moreover, even were the Colony system more universally adopted, especially on arable farms and small holdings, a still greater and more rapid development would take place. One can travel many scores of miles in Germany without observing a single field house, in much the same way as in our country a decade ago. From what one hears, however, there is no doubt but that this newer system of housing is receiving attention, and in a few, a very few as yet, districts it is being adopted by one or two of the more progressive farmers. In time their example will no doubt be followed by an ever increasing number of farm poultry-keepers.

The few types of the portable house that I have seen do not appear very practical. The tendency is towards heaviness, elaboration in detail and cost. This, in fact, applies not only to the portable sheds but also to the permanent structures. The extension of this system in Great Britain was due to a great extent to the simple forms of houses put

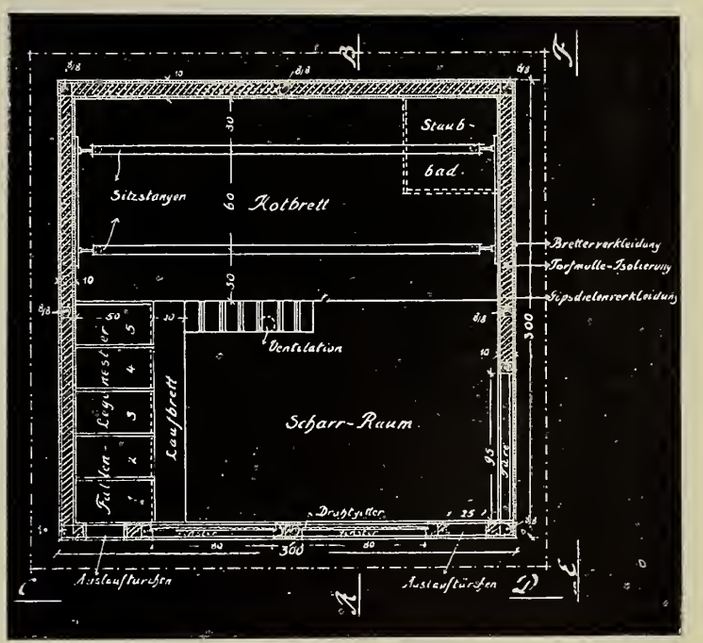


Fig. 1—Ground plan of German Poultry house. Staubbad—dust bath; Sitzstangen—perches; Kotbrett—dropping board; Fallen-Legenester—trap nests; Scharr-Raum—scratching shed; Laufbrett—alighting board; Fenster—window; Drahtgitter—netting; Auslauftürchen—trap-doors.

on the market by the various appliance makers. Whatever makes for enhanced cost in initial expense must be avoided, and until this lesson is learnt by the poultry-keepers in Germany it is unlikely that any rapid advancement will be made in this direction. Receptivity is a trait in the

German character, and this will without doubt lead to the adoption of whatever is most suitable to their requirements.

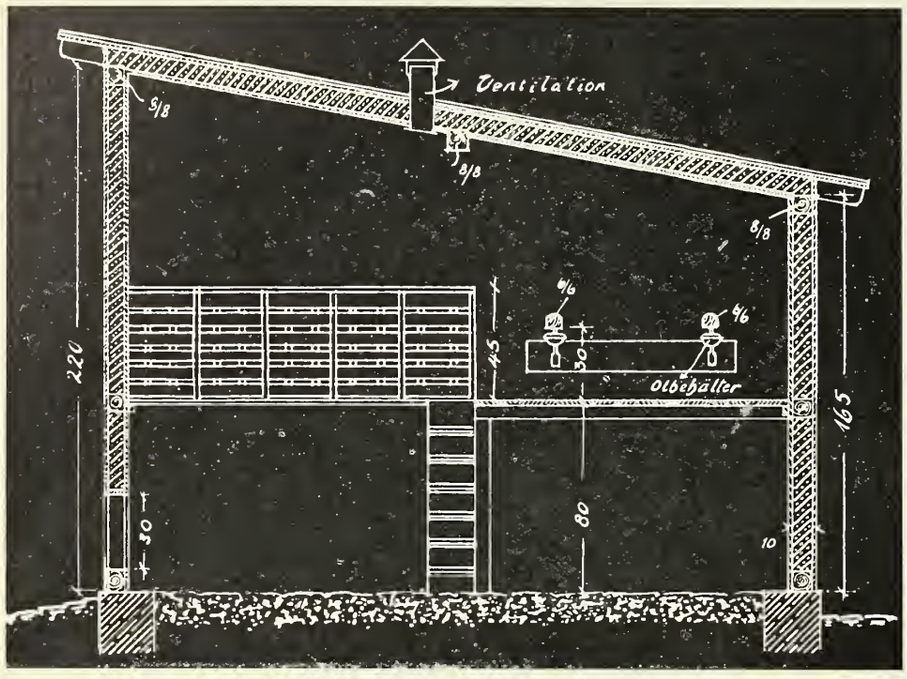


Fig. 2—Section front to back. (Olbehalter means oil-bath.)

The three houses I propose to describe have been designed by Herrn Karl Haas, the energetic director of the Teaching and Breeding Centre at Erlangen. This station is about fifteen miles distant from Nuremburg and was established in 1910. The three houses are all permanent in form, and, as will be seen from the description, are complete in every detail. The original specifications are given in metres and centi-metres, but I give them in terms of feet and inches as near as possible.

Permanent House for 20-25 Birds.

Fig. 1. gives a view of the ground plan (Grundriss) and Fig 2. a section from front to back. The house is 9ft. 9in. in length and breadth, 7ft. 3in. high in front and 5ft. 5in. high at the back. The front, or south side, is fitted with two windows, each 2ft. 6in. square, placed close together and rather more than half way up. Each window consists of four casement windows. The whole eight are made to open. The inside of the window aperture is covered with wire-netting. In spring they are kept wide open, so that the air, day and night, may pass in unhindered. In winter when very cold a canvas screen can be used.

The outer wall can be made of bricks (half usual thickness), of cement slabs or boarded. The inner wall is made of plaster and the joins are carefully smoothed to facilitate cleaning. Between the outer and inner walls there is a 4in. space, filled with some non-conducting material. Cork is sometimes used for this purpose. The roof is composed of plaster, 4 inches of the non-conductor and the whole covered with a good roof paper or felt. In the centre of the roof is a ventilating shaft 6 inches square.

A door 3ft. wide and 5ft. 6in. high is built in the east end of the house and this is fitted with a window 16in. by 10in. Two trap doors are placed in the front, each 10ins. by 12ins. It should be noted that two traps are provided so that double runs may be used, hence these can be placed on any side according to the run accommodation.

The whole house stands on a brick foundation, built two or three courses high. Wooden or cemented floors are not necessary. It is best to fill with beaten earth, with sand and litter on top for scratching. In one corner there is a dust bath 6ins. high and 2ft. 6in. square.

The nests and dropping-board are both raised 2ft. 6in. above the floor, thus allowing the whole of the floor-space for scratching. Five trap nests are fitted, each 14ins. wide, 19ins. deep and 17½in. high, with an alighting board 9ins. wide in front. The dropping board is 3ft. 10in. wide and one foot above are the perches. There are two in number, made of scantling

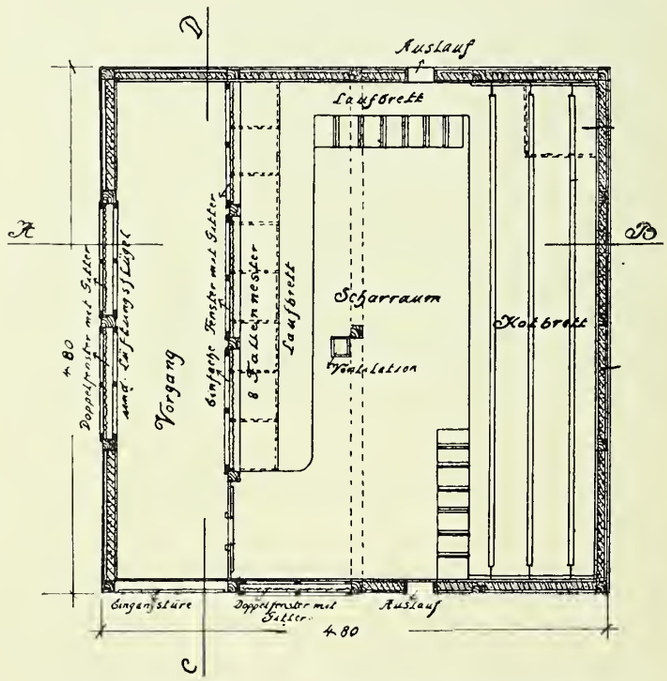


Fig. 3—Ground plan of another type of German house. Staub-bad—dust bath; Sitzstangen—perches; Kottbrett—dropping board; Fallen-Legenster—trap nests; Scharr Raum—scratching shed; Laufbrett - alighting board; Fenster—window; Draghtgitter—netting; Auslauftürchen—trap-doors; Vorgang—corridor; Eingangsture—door.

2½in. × 2½in. with the top corners bevelled. They are not fixed directly to the walls, but are held in oil-bath supports as shown in Fig. 1 and 2. It is given that each bird requires 8in. to 10in. perch room, hence the house fitted as above will accommodate 25 fowls. If the dropping board is made another 19in. wider, a third perch can be used for another twelve birds.

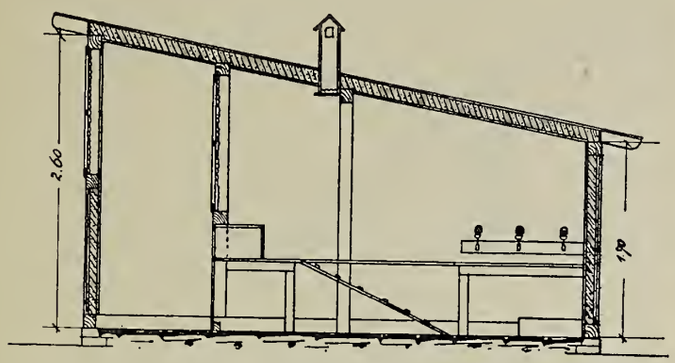


Fig. 4. Section A-B. Sectional view to house described in Fig. 3.

Model House with Corridor for 60 Birds.

This form of house is rather more elaborate than the foregoing, and in a single house we hardly understand the need for a corridor. If built in a range one could appreciate the advantage.

It is 15ft. 9in. wide and the same long, 8½ft. high in front (south side) 7½ft. high at back of corridor and 5½ft. high at back. The passage is 3ft. wide. The front is fitted with two double windows, each 4ft. square, and placed at the top. These, as all other windows, are composed of four separate casements, and are netted over. The front of the house proper is fitted with three single windows, the same in size as above, also a 3ft. door leading from the corridor, also eight doors to nest-boxes under the windows. The entrance to the house is through a door 3ft. by 5½ft. at the east end of corridor. (Figs. 3 and 4).

The nests and dropping board are 2ft. 6in. above the floor. Of the former there are eight. There are three perches, fitted to oil bath supports as in the other house. The alighting board, dropping board, ventilation shaft and dust bath are as already described. In the east end there is a window 4ft. by 4ft. netted. Two trap doors are fitted one in the east end and the second in the west end. The walls and roof are made in a similar way as in the case of the smaller house, as is also the foundation.

Earth-House for 80 Birds.

As far as we are aware this is a new form of house in this country. We have seen similar forms in many parts of Germany and on all sides a good account is given of them. We regret we can give no particulars as to the cost of erection.

The total length of house is 26ft., width 9½ft. although the roof extends another 4ft. 9ins. on each side as shown in Fig. 5. The scratching shed is 16½ft. long and the roosting chamber 9½ft. long. The height is 6ft. to the apex and 3ft. to the eaves, both inside measurements. There are twelve nests

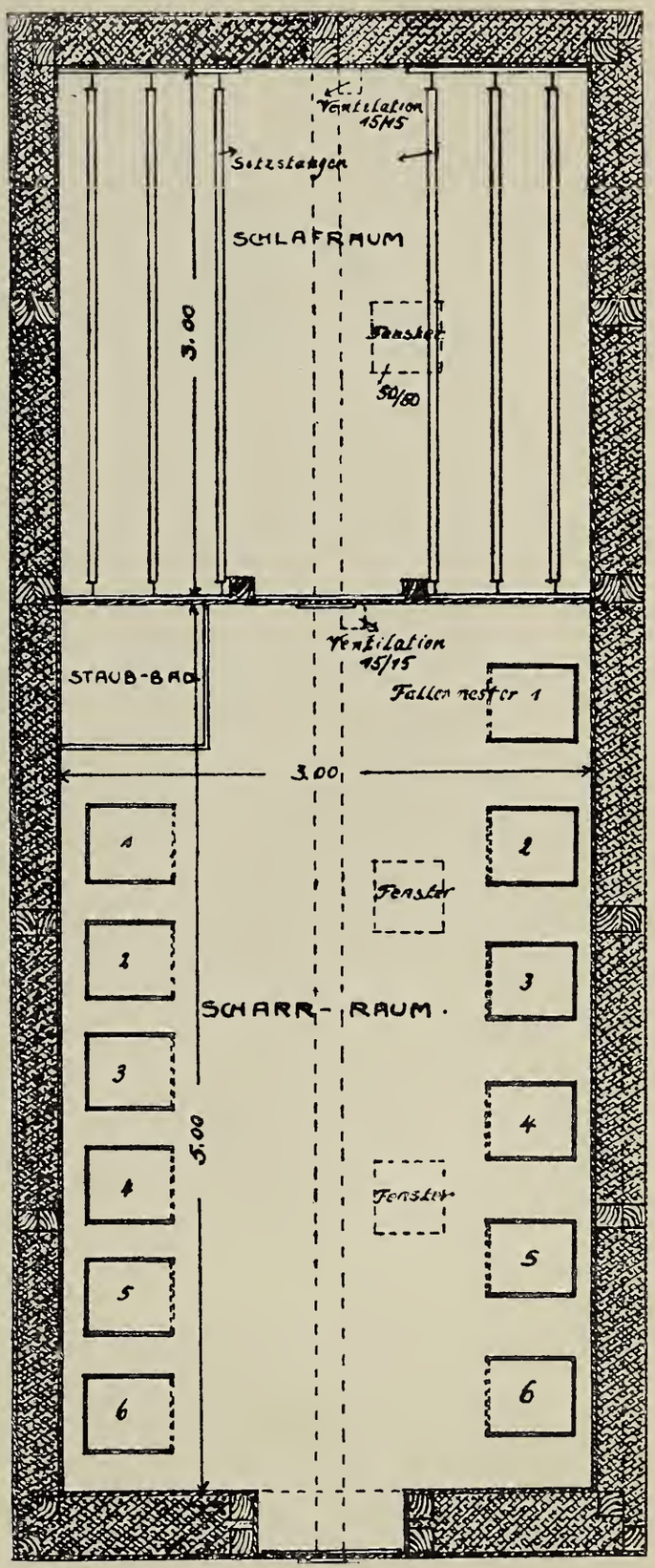


Fig. 5. Ground plan of earth house, Scharr-Raum—scratching area; Schlarfraum—roosting chamber; Fenster—window; Fallen-nester—trap nests; Sitzstangen—perches.

and a dust bath in the larger section and six perches in the smaller compartment. Three windows are fitted in the roof each 19in. square, one being in the roosting section, also two ventilation shafts, each 6in. by 6in. one in each part of the house (Fig. 5). A door, with trap-door is built in one end, also between the two compartments. The two three-foot walls are built double and filled in with a non-conductor and the roof is composed of a framework, straw, felt and earth to surmount all. (Fig. 6)

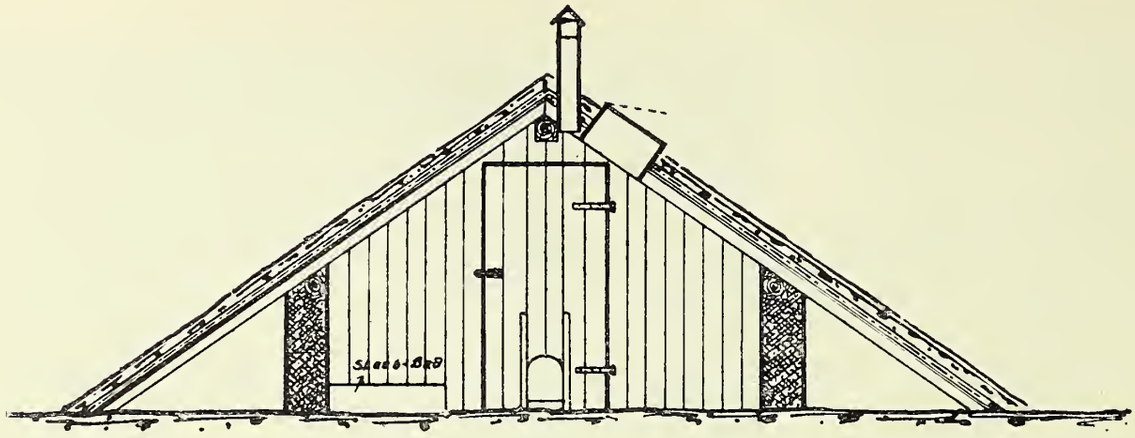


Fig. 6. Section through scratching shed of earth house.

COLONIAL AND FOREIGN.

Kansas State College.

Mr. W. A. Lippincott has been appointed Professor of Poultry Husbandry.

Iowa Experiment Station.

Mr. F. N. Marcellus has been appointed Instructor in Poultry, and will be in charge of the Poultry Experiments.

Ware Feathers.

The American *Poultry* says "It is by no means altogether a disadvantage for chickens to feather rather slowly. It is often the chickens whose frames have developed first and their feathers afterwards that attain to the largest size—in fact it may be that they are quite big birds before the chicken fluff has disappeared." Breeders whose chickens run about nearly naked may take heart.

A Bad Season in America.

A valued correspondent writes : "The Poultry Season of 1911-12 started off very well in this country, but the severe weather and cold spring put a tight break on everything, with the result that this has been one of the poorest seasons that American and Canadian poultry men have experienced during the last ten to twenty years. The egg yield has been much reduced, the fertility very low, the hatching of chicks bad, and the sale of eggs, day old chicks, etc., cut down fully one half and perhaps more."

Progress in New South Wales.

The New South Wales poultry expert, Mr. G. Bradshaw, states that the number of poultry—fowls, ducks, geese, and turkeys—in New South Wales on areas of one acre and over had increased from 3,216,191 in 1909 to 3,696,766 in 1910. There were, it was estimated, 12,096,859 dozen eggs laid in 1909, and 13,204,906 dozen in 1910. Figures were quoted showing the variation of prices for poultry and eggs during different months of the year. The poultry industry for the past year was valued at over £1,600,000, and had increased by over 400,000 head of poultry, and 1,000,000 dozen eggs.

New Zealand Poultry for Canada.

Mr. J. B. Merrett, says the (*Auckland, N.Z., Weekly News*) received advice from Honolulu that a consignment of eggs sent by him had arrived in splendid condition, and asking that next season regular shipments be made. From Vancouver he also received an order for 2000lbs. of table chicken to be sent next month, and asking for regular shipments of eggs for next December, January, and February. Mr. Merrett states that trade with Canada offers a good market for New Zealand's surplus poultry and eggs. Better prices are paid than by shipping to London, while freights are less and the market is two week's sailing nearer the producer. Honolulu is also a close market that may be exploited to great advantage.

INTERNATIONAL ASSOCIATION OF POULTRY INSTRUCTORS AND INVESTIGATORS.

PRESIDENT-ELECT:—MR. EDWARD BROWN, F.L.S.
52, Queen Anne's Chambers,
Westminster, London, S.W., England.

HON. SECRETARY *(pro. tem.)*:—DR. RAYMOND PEARL.
Agricultural Experiment Station,
Orono, Maine, U.S.A.

PROGRAMME OF THE MEETINGS OF PROVISIONAL COMMITTEE.

JULY 18th to 24th, 1912.

PLACE OF MEETING.

The meetings will be held in the Council Room of the Royal Agricultural Society of England, 16, Bedford Square, London, W., England (by kind courtesy of the Council). These will not be open to the public, with the exception of the morning session on July 18th, as noted below.

PROGRAMME.

Wednesday, July 17th, 1912.

9.30 p.m. Reception by the Marchioness of Salisbury, President of the National Poultry Organization Society.

Thursday, July 18th, 1912.

11 a.m. General Session. Chairman; The Right Hon. the Lord Middleton, President of the Royal Agricultural Society of England.

(Open by invitation only, to the public and representatives of the Press.)

Address of welcome by The Right Hon. Lord Lucas, Parliamentary Secretary to the Board of Agriculture and Fisheries.

Response by Professor F. C. Elford, Buffalo, N.Y., Past President, American Association; Herr W. A. Kock, Copenhagen; Mr. R. J. Terry, Poultry Expert, Tasmania; Mons. M. Van Gelder, Brussels.

Election of President and Secretary.

Presidential Address by Mr. Edward Brown, F.L.S.

Subject: "International Co-ordination in the Poultry Industry."

2-30 p.m. General Session.

Official Communications from Members of Provisional Committee.

Election of Sub-Committees as follows:—

(*a*) Constitution and Bye-laws.
(*b*) Finance.
(*c*) World's Poultry Congress.
(*d*) Publications.

5 p.m. Visit to Houses of Parliament, on the invitation of Col. Robt. Williams, M.P., Treasurer National Poultry Organization Society.

Friday, July 19th, 1912.

10 a.m. General Session.

Topic: "The History and Present Status of Poultry Instruction and Investigation."

(The entire day's Session will be devoted to the reading of Reports on this General Topic. It is expected that a report will be presented for each country represented on the Provisional Committee.)

2-30 p.m. General Session. Continuation of morning's programme.

8 p.m. Dinner: by invitation of The Right Hon. the Lord Lucas, Parliamentary Secretary of the Board of Agriculture and Fisheries.

Saturday, July 20th, 1912.

10 a.m. Meetings of Sub-Committees.

1 p.m. Luncheon: by invitation of the Proprietors of the "Illustrated Poultry Record," followed by

2-30 p.m. Motor car Excursion to Aylesbury Duck District and to Lord Rothchild's Poultry Farm, Tring.

Monday, July 22nd, 1912.

10 a.m. General Session,

"Topic: "The Needs and Possibilities of a Permanent International Organization of Poultry Teachers and Investigators. What should an International Association attempt to do"?

(A series of papers on this topic will be presented, to be followed by a general discussion by the Committee as a whole).

2-30 p,m. General Session. Continuation of Morning's Programme.

8 p.m. Dinner on the invitation of Robt. A. Yerburgh, Esq., M.P., President of the Agricultural Organization Society.

Tuesday, July 23rd, 1912.

10 a.m. General Session. Continuation of the Programme on the same lines as on Monday.

2-30 p.m. General Session.

Topic: "Organization of Experimental Work."

8 p.m. Dinner on the invitation of the Utility Poultry Club.

Wednesday, July 24th, 1912.

10 a.m. General Session.

Report of Sub-Committees and Discussions.

2-30 p.m. General Session. Continuation of morning subjects.

AGENDA.

The following list indicates some of the more important subjects, which will be discussed either formally or informally during the meetings:—

(1) Qualification for Membership in Association.
(2) Organization of Affiliated (National) Societies.
(3) Draft Scheme of Instruction.
(4) Research and Experimental Work.
(5) Relationships with Departments of Agriculture.
(6) Lists of Appointments offered.
(7) Dissemination of Information and Experience. (Including question of an International reviewing journal or Zentralblatt for poultry literature.)

(8) Proposals regarding World's Poultry Congress.

(9) Standards of Breeds of Poultry.

(10) Election of Fellows, a limited number of persons who have rendered distinguished services in the advancement of Poultry Husbandry.

Thursday, July 25th, 1912.

Excursion to Poultry Breeding Establishments and Farms in Kent, on the invitation of the Editor of the "Poultry World."

PROVISIONAL COMMITTEE.

ARGENTINE REPUBLIC.—Senor Alfredo Martinez de Horz, 12, Hobart Place, S.W.

AUSTRALIA.—New South Wales—Professor H. W. Potts, Principal Hawkesbury Agricultural College; Queensland—Mr. F. W. L. Anderson, Brisbane; South Australia—Mr. D. F. Laurie, Department of Agriculture, Adelaide, & Major Norton, D.S.O., London; Tasmania—Mr. R. J. Terry, Agricultural Department, Hobart.

BELGIUM.—Mons. M. Van Gelder, Uccle, Brussels.

BRAZIL.—Mr. Leo L. Furness, Experiment Station of Aviculture, Puida.

CANADA.—Professor W. R. Graham, Ontario Agricultural College, Guelph.

CYPRUS.—Mr. W. Bevan, Director, Agricultural Education, Nicosia.

DENMARK.—Konsultent W. A. Kock, Copenhagen.

ENGLAND.—Professor F. V. Theobald, S. E. Agricultural College, Wye; Mr. C. E. J. Walkey, Somerset County Council.

FRANCE.—Dr. Loisel, Directeur du Laboratoire d'Embroyologie générale à l'Ecole des Hauts Etudes, Paris.

GERMANY.—Professor Beeck, Zentralgeflugelzuchtanstalt, Crollwitz, Halle-am-Salle; Director Karl Haas, Geflugelzuchtanstalt, Erlangen, Bavaria Professor Dr. Henrich Poll, University of Berlin.

HOLLAND.—Mr. H. B. Beaufort, Haarlem.

INDIA.—Mr. A. C. Dobbs, B.A., Agricultural Department, Pusa, Bengal.

IRELAND.—Mr. Jas. S. Gordon, B.Sc., Department of Agriculture, Dublin.

ITALY.—Signor Alfredo Vitale, Naples.

MEXICO.—Senor Elmer Stearns, Escula de Agricultura, Juarez, Chihuahua.

NEW ZEALAND.—Mr. F. Brown, Department of Agriculture, Wellington.

NORWAY.—Lieutenant-Colonel Thame, Christiania.

RUSSIA.—Miss M. Friede, Kieff; Mr. D. A. Swerbeieff, St. Petersburg.

SCOTLAND.—Mr. Will Brown, West of Scotland Agricultural College, Kilmarnock.

SOUTH AFRICA.—Professor T. E. Durden, Rhodes University College, Grahamstown, Cape Colony; Mr. Reginald Bourley, Experiment Station, Potchefstroom, Transvaal.

SWEDEN.—Konsultent W. Sjostedt, Smedly.

TURKEY.—Mr. H. Caramanin, Amassia.

UNITED STATES OF AMERICA.—Professor Leon J. Cole, Madison, Wis.; Professor F. E. Elford (President American Association), Buffalo, N.Y.; Professor J. E. Rice, Cornell University, Ithaca, N.Y.

WALES.—Mr. W. Hopkins.Jones, University of North Wales, Bangor.

WHO'S WHO IN THE INTERNATIONAL ASSOCIATION.

Whatever may be the future of and whoever may be responsible for the International Association of Poultry Instructors and Investigators, the provisional committee embodies those who in the different countries represented thereupon are largely concerned in the advancement of teaching the subject and experimental work. They are, therefore, the men and women of the moment, and their personalities of considerable interest to all. We have pleasure in, as far as possible, giving some record of who they are and what they are doing. Some of these have already appeared in our gallery of worthies, and where it has been necessary to repeat what has been said before readers will bear with and excuse the repetition. We hope to complete the list in our next issue.

MR. EDWARD BROWN, F.L.S.

PRESIDENT-ELECT.

The broad outlines of Mr. Edward Brown's work in the advancement of industrial egg and poultry production are so almost universally known that we should consider any remarks of ours on that score as redundant, were it not that his unanimous election as President of the International Association of Poultry Instructors and Investigators, whose preliminary meetings are shortly to be held in London, makes this a fitting occasion to recall some of the details of a career that has been mainly devoted to matters affecting the economics of the industry.

Mr. Brown's name has been so inextricably associated with the practical side of poultry culture, or that branch of poultry keeping that is colloquially described as "utility," equally as to production, education and organisation, that there must be many present-day breeders, who find it difficult to think of him as a fancier. Nevertheless, he was one of the founders and is probably the only remaining original member of the Leghorn Club, the first specialist poultry society established in this country, and he was for many years an exhibitor of the breed—winning the cup at the Crystal Palace Show in 1875 He was also among those who, in 1878, attended the preliminary meeting of the Poultry Club.

In 1879 Mr. Brown took a prominent place in the journalism of the fancy, as founder and first editor of the *Fanciers' Chronicle*, a paper which was established at Newcastle-on-Tyne, and became transferred subsequently into the *Stock-keeper*; and in assuming editorial duties he ceased to be an exhibitor, the two positions in his opinion being incompatible. His energies were, however, soon transferred to London, and in 1880 he became poultry editor of the *Live Stock Journal*, subsequently taking entire charge of the *Fanciers' Gazette* from 1887 to 1891. During these latter years his interest in the practical side was as steadily increasing as

his sympathy with fancy questions was declining, and the process of evolution received considerable impetus during the execution of a commission of enquiry into the poultry industry in Ireland; the results of this investigation being recorded at the time in the pages of the *Weekly Freeman*, of Dublin, and afterwards republished in book form. This work was undertaken in 1887 at the invitation of the late Mr. Dwyer Gray, M.P,, every county in Ireland being visited, and the basis laid for the considerable developments that have since taken place in that country.

Three years before this, however, there had been published Mr. Brown's first book on poultry, entitled *Profitable Poultry Keeping*, under the pseudonomyn of "Stephen Beale," and in 1891 he produced a work for the industrial producer, entitled "Poultry Keeping as an Industry for Farmers & Cottagers." In the same year the fund known as the "Whiskey Money" became available for purposes of technical education, and within a few days of the publication of the book last referred to, three County Councils invited Mr. Brown to lecture on his special subject.

The journalist thus became a lecturer, and the fancier was finally merged in the enthusiastic advocate of industrial production. For several years Mr. Brown held appointments as lecturer and instructor under various public bodies in Great Britain, and during this period, he and his sons founded the College Poultry Farm, at Theale, as a teaching and experimental centre, continuing that until 1909.

MR. EDWARD BROWN, F.L.S. [Lafayette.
PRESIDENT-ELECT.

In 1899 he was appointed Secretary of the National Poultry Organisation Society, and his strenuous labours in that position to develop poultry keeping as a branch of agriculture are among his most widely appreciated efforts on behalf of the industry which he has done so much to raise to a level of true economic dignity. This position has brought him into close contact with men and women in all parts of the world engaged in the promotion of the poultry industry. In the year of his appointment he acted as Honorary Secretary of the National Poultry Conference, and occupied a similar position at the second Conference in 1907. His work has necessitated visits to nearly all parts of Europe and America, and as the outcome of his journeys he has written valuable reports on the Poultry Industry in America (1906), Denmark & Sweden (1907), Belgium (1909), and Germany (1912). In 1909 he accepted the position of Poultry Expert to the Agricultural Organisation Society, in whose operations he takes a considerable share, and he is known as a speaker all over the country.

In addition to the above, Mr. Brown is also the author of several well-known works on poultry, including "Poultry Keeping an Industry for Farmers and Cottagers"; "Races of Domestic Poultry"; "Poultry Fattening"; and "Industrial Poultry-Keeping" He is, moreover, a prolific writer for the Press upon poultry questions, and edits the *Journal* of the National Poultry Organisation Society.

In the development of the poultry industry, Mr. Brown has always advocated the importance of educational and experimental work, as evidenced by the establishment of the College Poultry Farm at Theale, which was maintained for over ten years at his own and his sons' expense.

At this centre upwards of 600 students were trained, many of whom have done much in this and other countries. The experiments conducted there, although on a limited scale, as public grants were not available, were very valuable indeed, as evidenced by the reports published in the *Journal of the Board of Agriculture*, and were the first of practical importance in this country. Believing that a great central institution is essential to the further development of the industry, for the last two years Mr. Brown has devoted considerable time and attention to the promotion of a National Poultry Institute, to which large grants have been promised from the Development Fund. It may be hoped that this important object will be realised.

DR. RAYMOND PEARL.

HONORARY SECRETARY.

One of the most notable figures at the meetings of the International Association will be Dr. Raymond Pearl, who is chief Biologist at the Maine Agricultural Experiment Station, Orono, and whose name is known through the entire globe amongst poultry workers as one of the most advanced investigators of poultry problems. The reports which have been issued from the Maine Station since Dr. Pearl undertook the charge have commanded the widest attention, and, although he has been compelled to destroy theories held before, or to discard notions that have proved to be untenable, that was necessary and carried out in no iconoclastic spirit. In fact, the constructive followed hard upon the destructive, and the series of bulletins which have been published during the last four years have laid poultrymen everywhere under a tribute to the talented scientist who had thus been brought into their service. Some of these observations have been issued by the Department of Agriculture at Washington, and others have appeared in American and German scientific journals. At the present time investigations are being conducted at Orono, with the view to discovering, if that be possible, what are the factors which make for increasing the fecundity of the domestic hen upon a natural and, therefore, a scientific basis, instead of breeding from high laying, trap-nested stock, which broke down after seven years continuous selection upon these lines. Whether he will succeed in his aim remains to be seen. In his hands the Maine Station has advanced to the front rank in investigational poultry work.

Dr. Pearl is a keen biologist, and is known in other branches than poultry. He is to read a paper at the Eugenics Congress in London the week after the poultry meetings. Two years ago he was President of the American Association of Instructors and Investigators in Poultry Husbandry, when the first proposals were made for forming a World's Association, which were continued under his successor, Professor J. E. Rice. Last year when the question was raised again at Orono it was placed in Dr. Pearl's hands to carry forward, which was done at once with enthusiasm and energy. In spite of abundance of other work Dr. Pearl agreed to act as Honorary Secretary, *pro tem*, and the general work of organisation has been in his hands, the results of which will shortly be seen.

Although Dr. Pearl's direct connexion with the poultry industry has not apparently been a long one, his work has been of the greatest value. The questions which have to be faced in respect to breeding, which is his special line, are manifold, and with a combination of the scientist and the practical worker it may be anticipated that great progress will be made in the future by the solution of problems which have arisen and will yet arise. Those who had an opportunity of meeting Dr. Pearl during his visit to this country two years ago were greatly impressed by his ability, and will look forward to seeing him again.

MR. H. B. BEAUFORT,

HOLLAND.

Mr. Beaufort was educated at the Delft University, and afterwards settled at Aerdenhout, near Haarlem, where he commenced amateur poultry breeding. Since 1900 he has been actively engaged in the pursuit, of late devoting himself to experimental work. To increase his knowledge Mr. Beaufort studied poultry work in Belgium and France, and holds a certificate of the well-known School of Aviculture at Gambais. One result was his appointment in 1910 as Poultry Consultent by the Dutch Government. Foundations have been laid throughout Holland for the increase of educational work in poultry, and well appointed farms are being established as teaching and demonstration centres. The V.P.N. (Netherlands Poultry Society) is working all over the country, and having 18,000 members, is a powerful factor. The Dutch Government is becoming more and more convinced that poultry are a source of profit to agriculturalists of all grades, and the appointment of Mr. Beaufort as Consultent has been a first step in the right direction.

MR. W. BEVAN.

CYPRUS.

Since 1903 this gentleman has acted as editor of the *Cyprus Journal*, a government quarterly publication dealing with Agriculture and Industries, and issued in English, Turkish and Greek. For two years he was Secretary of the Agricultural Loan Funds in that Island, and since 1905 has occupied the position of Assistant Director of Agriculture, which he has now vacated to assume the important

office of Director of Agricultural Education in Cyprus. Efforts are now being put forward to promote poultry production there, and it is hoped to develope turkey breeding as these birds appear to thrive specially well and are very good in quality.

MR. REGINALD BOURLAY

SOUTH AFRICA.

The son of Mrs. Bourlay, of Frankly, Worcestershire, a poultry atmosphere surrounded him in his early days, as that lady was largely responsible for the popularisation of Ancona fowls in this country. In the early nineties he was engaged with a brother fruit farming in Florida, but disaster in the shape of May frosts compelled his return, and he then took up poultry, being one of the first students at Reading, and receiving practical training at Highgate and elsewhere. He was engaged as lecturer by various County Councils, and for a time acted as Hon. Sec. of the Ancona Club. In 1898 he was appointed Secretary to the newly formed National Poultry Organisation Society, continuing as Assistant Secretary when Mr. Edward Brown undertook the direction of that body.

In 1901, Mr. Bourlay decided to try his fortunes in South Africa, and on the conclusion of the war he was appointed poultry expert to the Transvaal Department of Agriculture, which position he has continued to hold. He has lectured all over the Colony and is in charge of the teaching and experimental station at Potcheffstroom.

MR. H. B. BEAUFORT.
(HOLLAND.)

MR. WIL BROWN.
(SCOTLAND.)

MR. WIL BROWN.

SCOTLAND.

Mr. Wil Brown has been for nearly two and a half years Director of the Department of Poultry Husbandry at the West of Scotland Agricultural College, with oversight of the work at Holmes Farm, Kilmarnock, and in the ten and a half counties associated with the College.

PROFESSOR F. C. ELFORD.
(U.S.A.)

Educated at University College, London, he afterwards became a student at University College, Reading, and finally graduated at the Leipzig University. In 1900 he came into association with the College Poultry Farm, Theale, taking the position of practical instructor in Agriculture in 1904 and of assistant lecturer in Poultry-keeping at Reading in 1906. Prior to that time he lectured four seasons under the Aberdeenshire County Council, and has acted in the same capacity elsewhere. For nearly three years he was lecturer on Poultry at the Royal College of Agriculture, Cirencester.

He has travelled in many European countries, and has been right across America to the Pacific. One of his most notable works was as Secretary to the departmental committee on Poultry Breeding in Scotland, whose report was largely his, and which is the basis of present-day developments in that country.

Mr. W. Brown's tastes are specially scientific. Many of the experiments carried out at the College Poultry Farm, Theale, were under his direct charge. He has made a considerable amount of research into the problems of incubation, and read a paper at the second National Poultry Conference in 1907 on "Observations on Moisture and ventilation in Incubators," which awakened great interest, but he has not had time to complete his experiments in this all-important direction. Feeding questions have also commanded his attention. That in these and other directions there is plenty of scope for inquiry is unquestionable, and it may be hoped that the opportunity for further observations will yet be afforded.

DR. LEON J. COLE,

UNITED STATES.

For a considerable time Dr. Cole was engaged at the Rhode Island Agricultural Experiment

Station, where he devoted a large amount of his energies to investigations relating to blackhead in turkeys, a subject which has been specialised at that institution and is of vast importance. Although the practical results have not as yet been so great as might be wished, the observations made are most valuable, and when completed should help greatly in stemming the decline of turkey breeding in America. Dr. Cole is now Professor of Animal Plant Biology, and in connection with Professor Halpin, is engaged in investigations relating to poultry.

PROF. T. E. DUERDIN,

CAPE COLONY.

After a Zoological training at London University and the Royal College of Science, Prof. Duerden held official positions in Dublin, the West Indies and the United States of America, but for the last six or seven years he has occupied the chair of Professor of Zoology at the Rhodes University College, Grahamstown, South Africa. Grahamstown is the centre of a large agricultural community, engaged mostly in ostrich farming, and from the time of taking up his appointment Dr. Duerden has devoted the whole of his energies, free from college duties, to the scientific study of the ostrich, until at the present time he is everywhere regarded as the scientific authority on the ostrich. The investigations have been aided by small appropriations from the government and Dr. Duerden has numbers of experimental breeding camps and ostriches under his control. His results have so far appeared in a series of articles, "Experiments with Ostriches" in the Agricultural Journals of South Africa, in addition to numbers of articles elsewhere. These are all preparatory to a complete work on the subject which he has in hand.

MISS FRIEDE
(RUSSIA.)

PROFESSOR F. C. ELFORD,

U.S.A.

The Macdonald College at St. Anne-de-Bellevue, in the Province of Quebec, is probably the finest agricultural college in the world, and has a strong poultry section which was, until recently, in charge of Mr. F. C. Elford, who was trained at the Ontario Agricultural College at Guelph. He is now residing at Buffalo, N.Y., and for the last year has been President of the American Association. On the completion of his course he spent some time in farming, specialising in hogs, cows, and chickens. The call to a wider opportunity came when Professor Robertson instituted fattening stations under the Central Government. Mr. Elford was placed in charge of that at Hornesville, Huron Co., Ontario, and afterwards, on the resignation of Mr. F. C. Hare, was made Chief of the Poultry Division at Ottawa, which position he continued to hold until six years ago, when the Macdonald College was founded. To the latter he accompanied Dr. Robertson, and there he built up its splendid poultry plant. Recognising the importance of better methods of marketing, Mr. Elford was largely instrumental in establishing the Poultry Producers' Association of Eastern Canada, of which he was secretary, and by which it is hoped to secure the adoption of co-operation in the sale of produce. Professor Elford is an honest worker, and will do yet more in his new sphere.

MISS M. FRIEDE,

RUSSIA.

In Russia, as in many other countries, the work of poultry breeding and production is mainly that of women, and the Ministry of Agriculture has sought the services of members of that sex to assist them in their efforts to increase and improve the poultry industry. A leading place must be given to Miss Friede, who is head of the teaching centre at Plinssa, where instruction is given under the ægis of the Department of Agriculture. Her work is not, however, restricted to that place, as she is engaged in peripatetic teaching over a wider area, and exercises considerable influence upon those with whom she is brought in contact.

Miss Friede has for many years taken a great interest in poultry. In 1908 she was sent to the College Poultry Farm, Theale, for a six months, course of training, at the end of which she held a high position in the examinations and was awarded the certificate of Reading College. She then proceeded to America, spending a year in studying the methods followed in the United States and Canada, entering various institutions so as to

Herr W. A. KOCK.
(DENMARK.)

qualify herself for the work to which she was destined. It speaks volumes for her ability to state that although she had never visited England before 1908, she had so mastered our language that she was able to speak and write in English with remarkable facility.

PROF. W. R. GRAHAM, B.Sc.

CANADA.

Among the visitors coming to this country no one will receive a warmer welcome than Professor W. R. Graham, for his work at the Ontario Agricultural College, at Guelph, Canada, where for several years he has been in charge, and has there contributed greatly to the recent development of the poultry industry in the Dominion. At the College named is a large poultry plant and the great number of students passing through the college receive poultry instruction as a regular part of the curriculum, and in this way are able to exert a vast influence wherever they may afterwards settle. The annual poultry Institutes held at the college and organised by Prof. Graham are a very valuable feature, by bringing together those interested in this pursuit, and for discussion of the many problems which present themselves to those engaged in practical operations, the reports of which are disseminated widely and are highly appreciated. A very important place at Guelph has been given to experimental work, which has covered a wide range. The aim is to assist producers in their daily work, to which end the experiments have been of a practical nature, including tests as to various methods of housing, incubation and rearing, feeding, fattening, &c. The records show that saneness of outlook which is essential to Canadian conditions, where poultry breeding keeps food production as the first object.

Professor Graham was trained at Guelph, and is a combination of the agriculturalist and poultry man. He is a forceful speaker, and by his earnestness of purpose and clarity of judgment has won the confidence of those among whom he works.

Major NORTON, D.S.O.
(AUSTRALIA.)

KONSULTENT W. A. KOCK.

DENMARK.

Herr W. A. Kock, is adviser to the Danish Society for profitable poultry culture. A young man, for his age is thirty-two, he has seen much and done much. The development of the Danish poultry industry gave the opportunity, and his own ability has taken advantage thereof. A breeder of poultry almost from childhood, he has gone through various grades, inclusive of prizes at leading shows, and at these has often acted as judge. His attention, however, has been largely in the direction of practical breeding, and in his official position, to which he was appointed seven years ago, he is able to exert considerable influence, more especially through the Breeding Stations. The Danish Ministry of Agriculture has wisely expended money in sending its experts to study conditions abroad. In 1902 Herr Kock was sent on a tour of observation to England, Belgium, and France, extending over a period of four months, and two years later he visited England, Scotland, Ireland, Belgium, Holland and Germany, the results of which visits have been important. Later he was sent by the Minister of Agriculture to America for the same purpose. He acts as one of the jury awarding prizes for the best kept poultry in various districts. In addition to contributions to various papers and preparation of the Annual Reports upon the Breeding Centres Herr Kock published in 1906 an excellent work entitled "Poultry Breeding in Northern Europe, with Special Regard to Fattening of Chickens and Breeding of Winter Fowls." He was also a member of the committee, under the chairmanship of Herr J. Pender-

Principal W. H. POTTS, F.C.S., F.L.S. (NEW SOUTH WALES.)

sen-Bjergaard, to whose labours is due the Standard published a few months ago. An interesting personality, with great industry and wide knowledge, Herr Kock occupies a high position among continental exponents of modern poultry culture.

MAJOR A. E. M. NORTON, D.S.O., F.R.G.S.

SOUTH AUSTRALIA.

British Colonial Governments are nothing if they are not progressive. With a view to the development of trade with the mother country and protection of the interests of producers, several of these have established commercial agencies in London, which are designed to be the eyes, ears, and mouths of shippers, and, through them, of the farmers beyond the seas. One of the most notable of these is Major A. E. M. Norton, whose D.S.O. was gained in South Africa, where he served with the Australian contingent during the late war, and was won by valour at Bakenkop, O.R.C., on July 3rd, 1900.

Major Norton is a Shropshire man by birth, being connected with a family which has for many generations been associated with agriculture. In Australia he not only took great interest in the broader questions, but gave considerable attention to poultry, which he early regarded on industrial lines as worthy the attention of farmers, especially in view of supplying the needs of the British markets. Connected with the Produce Export Department at Adelaide, he speedily realised that it was essential to study the needs of customers and to adopt those methods calculated to secure the most satisfactory results. To this end it became necessary to change the system in vogue of collection, grading, and packing, and to ensure that the eggs should be maintained at a temperature which would preserve their quality. Moreover, Major Norton became a strong advocate of the export of non-fertile eggs, and the tests carried out under his personal supervision have abundantly proved that this is an important point for over-sea eggs. The results are seen in the growth of South Australian supplies and in the rapid increase of the poultry industry in the colony, where climatic and other conditions are so favourable, thanks to the enhancement of prices received. As it is yet only in its infancy, vast developments may be looked for in the immediate future.

Principal W. H. POTTS, F.C.S., F.L.S.

NEW SOUTH WALES.

PRINCIPAL Potts is a Northumbrian and was educated at Newcastle-on-Tyne. He is descended from a well known family of farmers on North Tyne. Emigrating to Queensland first, he eventually drifted to Victoria, where, in 1898, he was appointed Scientific Instructor in Dairying, holding many other public positions and serving in various ways. In 1902 he was made Principal of the Hawkesbury Agricultural College, in New South Wales, which is regarded as the most important in Australia. This college has accommodation for 200 resident pupils, and the adjoining land embraces 4,000 acres, of which 1,400 acres are under cultivation.

Shortly before his appointment the series of egg laying competitions, for which the college has acquired a world wide reputation, were organised, largely owing to the *Daily Telegraph* of Sydney. The New South Wales department of agriculture erected pens, a committee of prominent poultrymen was appointed, of which Principal Potts has acted as chairman for the last ten years. The attention thus given by the college to poultry work has had marked results in the Colony, and led to great developments.

Mr. Potts is President of Section G of the Australian Association for the advancement of science, is a member of the council of the Royal Agricultural Society of Sydney, and is a constant contributor to various agricultural publications.

PROFESSOR J. E. RICE.

UNITED STATES.

PROFESSOR James E. Rice, of Cornell University, Ithaca, N.Y., occupies a leading position, both as to instruction and experimental work, among the men engaged in the promotion of the poultry industry in the United States. Fortunate, indeed, in possessing the means and the will to take up poultry teaching on advanced lines, he has risen to his opportunities, and the Cornell reports

Prof. J. E. RICE.
(U.S.A.)

are among the best which appear on this subject. Moreover, Mr. Rice was, we believe, the first to attain to full rank as Professor of poultry-keeping. His knowledge of the subject is deep and wide, his earnestness of purpose constant. He is an attractive and interesting speaker and has a personality which marks him out among his fellows. Last

year he held the position of President of the American Association of Instructors of Investigators in poultry husbandry.

Mr. Rice is a graduate of Cornell, which he entered as an agricultural student in 1886, graduating in 1890. He is an example of the working student class, that is, working to live as well as to study, which is so striking a feature of American university life, for during his college course he was entirely self-supporting and managed one of the largest and most popular student boarding clubs of the time. From 1890 to 1893 he acted as assistant to the Professor of Agriculture at Cornell, during which time he gave a course of lectures on poultry to the students. For the next ten years he was engaged in poultry and fruit farming, but often gave lectures at the winter institutes. In 1903 he returned to the University as Assistant Professor of poultry husbandry, and in 1907 was raised to the full professorship. Under his care the courses of instruction have grown rapidly in popularity and the poultry plant has been greatly extended.

Lieut.-Col. THAMS,

NORWAY.

THE combination of poultry breeding with military duties is by no means unknown. Lt.-Col. Thams is a leading example. Borne in 1851, he holds the rank of Lieut.-Colonel in the Royal Norwegian Infantry, and is now sons-chef of the 2nd Infantry Regiment, and inspecting officer at the Royal Military High School in Christiania.

Lieut.-Col. THAMS.
(NORWAY.)

Since 1891 he has been secretary of the Norwegian Poultry Association, and is also keenly interested in rabbits and bees. He was awarded the silver medal by King Oscar II., and gold medal by King Haakon VII., for his efforts in these directions, and is commander of Danebrog Order, and Knight of the Swedish Sword Order. He is a frequent writer in the Norwegian papers on poultry questions.

Professor F. V. THEOBALD, M.A.,

ENGLAND.

EACH of the many sciences involved in the scientific breeding of poultry demands its specialist now-a-days. Zoology is no exception; and the expert zoologist who pays special attention to that part of his subject which is concerned with the parasitic diseases of fowls is not easily found. Mr. Theobald hardly needs an introduction to those of our readers who are conversant with the wider problems of the poultry industry in its relation to

PROF. F. V. THEOBALD, M.A.
(ENGLAND.)

other branches of agriculture. As vice-principal of thr South-Eastern Agricultural College at Wye, as the holder of several honorary appointments, and as the author of a great number of zoological works, including a leaflet on the parasitic diseases of poultry for the Board of Agriculture, he has a name and reputation both in and out of the British Isles. We believe that it was in 1906 that he received from the Khedive the Imperial Ottoman Order of the Osmanieh in recognition of his scientific services rendered to the Soudan Government.

Mr. Theobald was born in 1868. He entered St. John's College, Cambridge, in 1887, and graduated with honours in the Natural Science Tripos in 1890, taking his M.A. degree two years later. After four years' experience as an extension lecturer on Economic Entomology, beginning in 1890, he joined the staff of the South-Eastern Agricultural College as Zoologist in 1894, and has remained attached to that institution ever since. From 1901-3 he had charge of the Department of Economic Zoology at the British Museum of Natural History. He set up the gallery of economic zoology, where various agricultural, horticultural, forestry, animal, and human pests and parasites may be seen.

He is a fellow of the Society of Tropical Medicine; and honorary member of the Société de

Pathologie Exotique Francaise, of the Association of Economic Entomologists of America, and of the Scientific Committee of the Royal Horticultural Society ; a member of the Pests Committee of the Central Chamber of Agriculture and of the Permanent International Commission on Agricultural Education ; a past president and vice-president of the Association of Economic Biologists ; and hon. consulting zoologist to the National Fruit Growers' Federation and the National Amateur Gardeners' Society.

M. VAN GELDER,

BELGUIM.

BORN in Holland, M. Van Gelder received his artistic education in France. After travelling in many countries he lived for some years in America, finally settling in Brussels to devote himself to painting, living first at the "Villa Betsy," at Uccle, and later removing to the beautiful Chateau Zeecrabbe in the same suburb of Brussels, where many poultry-breeders have rejoiced to see the canvas pictures within and the living pictures without.

In 1901 he commenced poultry-breeding, gathering together many varieties of fowls and ducks. It was not until the following year that he saw the

M. VAN. GELDER.
(BELGUIM)

Barbus d'Anvers, which led him finally, aided and befriended by the late Louis Vander-Snickt and M. Charles Buls, to take up these diminutive races. A society was formed, the "Club Avicole du Barbu Nain," the success of which has been phenominal. Birds were found here and there, first the beautiful Millefleurs, and afterwards the wonderful Porcelaine, though then in undeveloped condition, perhaps one of the most beautiful plumaged fowls ever seen. The perfecting of these birds has been the work of years, in which skilful breeding has united with the highest artistic taste on the part of M. Van Gelder, who has devoted himself to it with an assiduity and enthusiasm beyond all praise. In this he was aided by many others, but his leadership was fitly recognised in 1909, when an album was presented to him signed by all the club members and the leading Belgian poultry-breeders. Progress was ever kept in view, and efforts put forth to secure additional varieties. As a result came the Cailles (Quails), the Whites, the Buffs, and the Blues, together with the Caillontés, information respecting which was given by M. Van Gelder in one of our recent issues.

The combination in M. Van Gelder of wealth, business acumen, breeding skill, and artistic taste is not often met with. With these he has, also, unbounded enthusiasm, as any one can see who visits his lovely residence. A photograph of some of the poultry pens was given in the POULTRY RECORD of May, 1910 (Vol. II., No. 8, page 407). He is now engaged in writing a complete monograph of the Barbus, with description of every variety, the manner of their breeding and the methods of housing and management found most successful. The book will be another added to the many services he has rendered, and it will be looked for with great interest.

MR. C. E. J. WALKEY,

ENGLAND.

Although the work of County Council lecturers is little known outside their own immediate areas, no more important contribution to the promotion of poultry-keeping can possibly be made. Among those who have wrought hard and well in this direction is Mr. C. E. J. Walkey, who since 1903 has been staff poultry lecturer to the Somerset County Council. Previous to that time he had acted for Dorset, Warwickshire, and Wiltshire. Born in 1866, he is eldest son of the late Rev. C. J. E. Walkey, for some time rector of Cornwall, Oxen, a keen cricketer and fisherman. He was educated at private schools, at the Royal Academy, Gosport, and at Dresden, Germany. After this stage was completed, he travelled upon the Continent, in India, and lived for nine years in South Africa, gaining experience of men and places which has been, and should be still more, valuable in the future.

A poultry-keeper from boyhood, with the usual intervals, for the last ten years he has bred Salmon Faverolles and Buff Orpingtons, but more recently has devoted considerable attention to the Mantes fowl, importing from the place of origin some of the best birds obtainable. In his breeding-pen he has four 1907 hens, with individual records of 207, 213, 225, and 246 eggs respectively, which were mated with an imported cock. These somewhat small hens are wonderful layers, and very fine in the flesh. He has also carefully studied the Bresse fowl, apparently having a predilection for French breeds.

For several years Mr. Walkey has been a member of the committee of the Utility Poultry Club, and was chosen as one of the representatives of that body on the provisional committee of the National Poultry Institute. His other public positions are many, ranging from rifle clubs to political organisations. Lately he has made his début as an author and his "Practical Pages for Poultry-Keepers" is one of those useful handbooks which are invaluable to the people it is Mr. Walkey's aim and business to serve.

Prizes for Eggs and Table Poultry.

Evidently the economic qualities of fowls are receiving attention in America. It is announced that cash prizes amounting to £100 (five hundred dollars) will be given at the next Boston, Mass., show for displays of dressed poultry and eggs.

Turkeys in the States.

The trend of the Turkey appears to be westward. It is stated that during the last three years the numbers bred in the State of Colorado have multiplied three fold.

Electric Incubator.

In New Orleans a six thousand egg incubator has been built for a poultry breeder. The machine is 40ft. in length and 5ft. in width, and consists of 40 compartments, each capable of holding 150 eggs, the temperature of each being controlled separately by means of thermostats which introduce into and throw out of the heater circuits resistances formed of electric lamps The average current necessary for each heater amounts to 20 to 25 volts, and the total consumption for the hatch is about 10 to 12 units per compartment. The owner of the apparatus states that six months' trials have demonstrated that it possesses many advantages over the ordinary gas or oil-heated incubators.

Eggs in Australia.

At one time eggs were frequently sold in Australia at 3d. per dozen. That was before local demand had grown to such dimensions or cold storage afforded a safe outlet. It is recorded that early in May eggs were selling in Sydney, New South Wales, at half-a-crown a dozen. This is not due to shortage of supplies, for twice as many had arrived as compared with the corresponding week in the previous year, but to rapidly advancing consumption.

The Luck of Bantams.

An Irish correspondent writes: "It may not be generally known that bantams are regarded by the peasants in most parts of the country as signs of bad luck. Some time ago I was in a farmer's yard in Meath, where there was a cattle-dealer buying cattle from the farmer, when a pair of the diminutive race came in to roost, whereupon the herd got the farmer to stop the bargaining until the birds were ejected."

Stock-keeper.

THE AMERICAN ASSOCIATION.

HOW IT ORIGINATED AND WHAT IT IS.

By Professor Elford, of Buffalo, N.Y., U.S.A.

THE history of this organization is not very clear. It seems to have grown out of a desire on the part of certain Instructors and Investigators to discuss together problems relating to their work. It was thought by some that the development of such an organization should be through the American Poultry Association; but as that Association's time seemed to be taken up with other subjects, the idea of a separate body grew in favour. The matter was debated for some time, and the first move was made in 1906, when a number of those engaged in poultry work met during the Madison Square Garden Show at New York City to consider what might be done. This started the ball rolling and though no definite action was taken the idea was gradually taking root and spreading until it was finally decided to hold a conference in connection with the course in poultry during the graduate school of agriculture at the Cornell University.

At this conference a regular organization was effected. It was decided to hold a conference annually and the next meeting place was to be Guelph, Ont. The first officers were, W. R. Graham, Guelph, Ont., President; James Dryden, Corvallis, Oregon, 1st Vice-President; Raymond Pearl, Orono, Me., 2nd Vice-President; James E. Rice, Ithaca, N.Y., Secretary-Treasurer. Five directors were also appointed and chairmen of eight committees, which are provided for in the constitution.

History does not state who the prime movers were in bringing about this organization, but the personnel of the first executive will indicate who were among the number at the organization meeting and there is little doubt that had it not been for the untiring efforts of Prof. James E. Rice, of Cornell University, Dr. Raymond Pearl, of the Maine University and Prof. W. R. Graham of the Ontario Agricultural College, nothing definite would have materialized.

The annual conferences have been held at the Agricultural Colleges and when possible, in connection with, or immediately before or after the Graduate Schools which are held every two years. This makes it possible for the members to attend both the conference and the poultry instruction given at the graduate school.

The Organization was effected July 25, 1908. at the time of the graduate school at Cornell University. The first annual meeting was held at the Ontario Agricultural College, at

Guelph, at the same time as the Poultry Institute, with W. R. Graham as President, James E. Rice, Sec.-Treas. The second annual meeting, 1910, was held in connexion with the graduate school at the University of Iowa, Ames, when Dr. Raymond Pearl was President, and Prof. H. C. Pierce, Sec.-Treas. In 1911 it was the intention to meet in connection with the American Poultry Association at their annual meeting; but owing to the lateness of the announcement of this Association's place of meeting, our Executive Committee accepted the invitation to meet at the University of Maine. During that year, 1910-11, Prof- James E. Rice was President and Prof. H. C. Pierce, Sec.-Treas. The meeting this year, 1912, will be held at Lansing, Michigan, June 26, 27 and 28th. The graduate school of agriculture is to be held at the Michigan agricultural college and will commence the week following the conference. No doubt a number of the members present at the conference will remain to hear the interesting lectures in poultry. Dr. Raymond Pearl will give a seri esof lectures, as also will Prof. James E. Rice. This year, Mr. F. C. Elford, formerly of Macdonald College, Quebec, is President and Mr. Homer W. Jackson, of State College, Pa. is Sec.-Treas.

The following extracts from the constitution will give some information as to the scope, membership, etc., of the organization :

ARTICLE 1, NAME.

Section 1. The name of the organization shall be the International Association of Instructors and Investigators in Poultry Husbandry.

ARTICLE 2, OBJECTS.

Section 1. The objects of this Association shall be the advancement of poultry husbandry throughout the United States and the Dominion of Canada, and especially as it relates to the profession of teaching and research.

NOTE. A motion to change the word "International" to "American" will be introduced at the Annual Meeting.

ARTICLE 3, MEMBERSHIP.

Section 1. The members of the Association shall be persons engaged in instruction or investigation in poultry husbandry in any educational institution or experiment station in the United States or the Dominion of Canada, who upon recommendation by one or more members, shall be elected by a majority vote of the Executive Committee.

ARTICLE 4, EXPULSION OF MEMBERS.

Section 1. Any member who shall be found guilty of an offence not in keeping with the dignity and honor of a teacher or investigator may be expelled by a two-thirds vote of the members of the Executive Committee, who shall receive and weigh evidence for and against the member accused. The member shall have the right of appeal to the Association.

ARTICLE 5, INITIATION FEE AND DUES.

Section 1. The initiation fee of this Association shall be two dollars ($2), payable with application for membership; and the dues shall be one dollar ($1) annually thereafter, payable on or before the date of the annual meeting.

Section 2. Members whose dues have not been paid within one year after the date of the last annual meeting shall be considered as having forfeited their membership.

Section 3. Persons who have been dropped from membership because of non-payment of dues may be reinstated by a majority vote of the Executive Committee upon receipt of a written statement from the Secretary-Treasurer that all back dues have been paid.

ARTICLE 9, COMMITTEES.

Section 1. At the annual meeting the President shall appoint

(*a*) A Legislative Committe of three whose duty it shall be to promote legislation which shall safeguard the interests of poultry husbandry.

(*b*) A Committee on Investigational work.

(*c*) A Committee on the Systematizing of Instruction in Poultry Husbandry.

(*d*) A Committee on the Advancement of the Principles of Breeding Poultry.

(*e*) A Committee on the Progress in the Knowledge of the Feeding of Poultry,

(*f*) A Committee on the Development of the Science of Incubation and Brooding.

(*g*) A Committee on Poultry Diseases and Parasites.

(*h*) A Committee on Bibliography.

NOTE. Two other permanent committees have since been added, viz.: Markets and Houses, and one temporary committee on International Organisations was formed for the year 1911-12, of which Dr. Raymond Pearl was chairman.

The work of this Committee was to assist in forming an organisation similar to this that would include those interested in poultry throughout the world. The work of this committee is finished since arrangements for the World's Conference which is to be held in London, England, during July of this year have been completed.

ARTICLE 10.

Section 1. The annual meeting shall be held at such time and place as shall be designated by the Executive Committee.

Section 2. Special meetings of the Executive Committee may be called by the President and must be called upon the written request to him of five members of the Executive Committee or of one-fifth of the membership of the Association.

Section 3. Notice of all meetings of the Executive Committee shall be mailed to each member of the Executive Committee by the Secretary-Treasurer at least ten days before they are held.

The conference meetings are not open to the press as it is thought members will feel more at home and therefore freer discussion obtained if what they say is not to be reported. The exclusion of the press was thought wise also because of the possibility of discussing investigational questions that at the time were not ready for publication. A full report of the meeting is being published by the Association and will be ready for distribution in a few days. They will be sold at a nominal price.

British Isles, Europe and other countries. This year we have received articles from Ed. Brown who is looked upon on this side of the water as the best informed poultry student in the world, and who is best fitted to become the first President of the first world's associaton. Mr. Brown has forwarded a most interesting paper on co-operative marketing of poultry and eggs. The following persons have also promised interesting articles: G. A. Palmer writes on up-to-date methods of Poultry Keeping; Mr. W. A. Kock, Copenhagen, Denmark, on co-operative Poultry Keeping in Denmark; Mr. Johannes Byman, of Ventrie, Sweden, on Studies and Methods in the Artificial Hatching for Hatching Large and Lively Chickens; Miss L. Murphy, Cork, Ireland, on Poultry Work in Ireland; Mr. S. C. Sharpe, Ringmer, nr. Lewes, England, on the Sussex Poultry Industry; Mr. N. A. Swaffield, Bridport, England, on Poultry Instruction in England; Mr. Wil Brown, of Kilmarnock, Scotland, and Prof. M. C. Houssay, Paris, France, have

French poultry-keepers believe strongly that it is a mistake to remove chickens from one house to another. [Copyright.

The above photograph of a rearing shed at Gambais, France, shows the arrangements which are made to avoid doing this.

The Association has received no grants of any kind, the funds at their disposal being derived from the initiation fee of 2.00 dollars, and the 1.00 dollar annual fees collected from its members.

Besides the reports of the various committees, the conference programme contains most interesting papers from our poultry friends in the promised papers, the titles of which have not yet been received.

We expect to have a most interesting and instructive programme at Lansing, Mich., after which Dr. Raymond Pearl and Prof. W. R. Graham and probably others sail for London to attend the world's conference already referred to.

THE NEED FOR AN INTERNATIONAL POULTRY ASSOCIATION.

By Edward Brown, F.L.S.

President-Elect, International Association of Poultry Instructors and Investigators

CONSTRUCTIVE work is the prime necessity in the poultry industry of to-day. To some extent we have exhausted the opportunities met with under ordinary conditions, and it is therefore essential that wider views shall be taken than heretofore. Merely to tread the same paths, or to duplicate methods which have been adopted in the past, would not conduce to those developments which must follow if our pursuit is to realise its possibilities. The need for such enlargement of vision is apparent in all directions. More and better poultry are frequently advocated. To enable more fowls to be kept, and to ensure that these be profitable, practical knowledge and experience, to a greater extent than ever before, must be attained. Many problems present themselves for solution. When, however, we seek for better poultry, the whole question assumes a wider phase, and the difficulties are enormously enhanced. At the other end of the scale the importance of efficient and thorough organisation for marketing the produce, in itself as necessary as, though subsequent to, production. Only those who have studied the subject throughout the entire range can estimate even to a limited degree what is involved.

Actual production, using that term in its widest sense, must be left to those who look to the results as a partial or entire means of livelihood. They alone can make or mar their own work. We may, however, bring to them the experience of others, influence them as far as possible by pointing out how their work may be extended and made more profitable, and assist them when difficulties arise, as they assuredly will. But whether and how far they respond is within their own right, determinable by no one else. On the other hand consumers, with few minor exceptions, must be reached through the ordinary commercial channels, co-operative or otherwise. In that direction organisation is an imperative necessity to the producer as well as the householder, and the work of the former may largely fail unless the difficulties which arise in the post stage are frankly faced and thoroughly investigated.

A Pen of Houdans—a celebrated French variety of poultry—at Gambais.

One of the results accruing from the enormous advance of the poultry industry which has marked the last two decades, is the demand for greater knowledge than is possible to the ordinary farmer or poultryman, who has not the opportunity of observing what is being done in his own country much less in other lands, and who cannot afford to undertake research and investigate the multitudinous difficulties in his path. And, further, it is not his business to disseminate whatever knowledge he may possess, however valuable that may be to his fellows. For this reason everywhere instructional and investigational work is rightly regarded as a public duty, the cost of which should be borne by the entire community, as is that of general education. Such has been recognised to a limited extent, in some countries more than others. It speaks volumes for the progress already made, small though it is as compared with what it will be, that in almost every land something is being attempted in this direction. As examples of what can be accomplished where central authorities lead the way, may be named Denmark and Ireland. It is not too much to say that in neither of these would the advances realised have been possible had producers been left to themselves. And what is true there is equally so elsewhere.

Up to a given point any individual country may rely upon its own experience, though few there be that have not found much to help in other lands. The stimulus of friendly rivalry is always great Without it onward movements would be very slow indeed. Whilst it is true that what may be suited to the conditions of one country is not necessarily desirable or best fitted to those of another, it is evident that the more all know of what is being done in each the stronger they will be. One instance will suffice to indicate what is here meant, namely, the trade in day-old chicks was of French origin, but probably it is true that for one bird now sold in France a thousand are annually disposed of in the United Kingdom and America. Introduction of this system has added greatly to the returns of one class of poultry-keeper. It is, therefore, the business of instructors to keep abreast of what is going on elsewhere, and to make the facts thus garnered known to all with whom they come in contact. The poultry man as a rule reads papers, the farmer does not. Therefore, unless such knowledge is brought to the last named, he will continue in his antiquated way. One of the serious hindrances which many poultry lecturers feel is that they have so few opportunities of learning at first hand what is being done elsewhere.

Important though it may be for the instructor to exploit the experience of his own and every land, so that he may be better able to help those with whom he comes in contact, that is true to an even greater extent with the investigator, who has to deal with problems involving long and patient research. In this direction the risks of unnecessary duplication are very great, and the work of other observers may enable him to commence where they left off or immediately anterior thereto, for by so doing years of labour may be saved. Further, what is being done in other branches may be helpful, and thus the wider the range of observation the more should be accomplished. In this direction everyone who has studied the question realises how small comparatively is our knowledge, and how great, therefore, are the opportunities presented. With all live stock breeding problems are supremely important, but most of all in respect to Poultry, not only by reason of the greater number of living units, but also from the fact that they are kept under less natural conditions, and that they have to be more frequently reproduced as a result of their shorter duration of life. Hence what to the horse or cattle breeder is of moment every five or seven years has to be faced annually or biennially by the poultry man. As a consequence the risks are greatly enhanced and deterioration may be much more rapid than in the case of larger animals. To no section of the community is investigation of greater importance than to poultry-keepers, who are in number many fold those of other animal breeders. And I am assured that to none will the advantages accruing from unity on the part of all those engaged in this task, no matter where there sphere of labour and of influence, find its higher expression.

Such, therefore, are some of the considerations which have led to the proposal for the formation of an International Association of Poultry Instructors and Investigators, and to the summoning of representatives from every country where this subject is receiving attention, to meet in London during the coming month. How far it will accomplish the purpose in view is in the womb of the future. That the object stated has commended itself is evidenced by the names of those who have consented to join the provisional committee. When formed it is hoped that all who are engaged in either direction indicated will be enrolled, so that the influence will be world wide, and the steadily advancing volume of knowledge available may be shared in by each and all. The first steps are about to be taken. The success of those which follow will depend upon the loyal co-operation and unity of purpose of all concerned.

BELGIAN POULTRY.

By Major F. Herbert.

THE Malines fowl is now becoming better known in England, but few of our breeders have any conception of the extent to which this variety is kept in Belgium. To those who have leisure and who take an interest in poultry I would strongly recommend them to make a motor trip through the poultry breeding districts of Belgium. Having just concluded a tour myself, I can safely say it would be most interesting.

The recent exhibition of poultry held in Brussels last February, under the auspices of The Fédération Nationale des Societes d'Aviculture de Belgique, gave one an insight into the fancy side of Belgian poultrydom. Held, as it was, under the Patronage of H.R.H. The King of the Belgians and the Belgian Government, it constituted a representative collection of the best poultry in Belgium. As an exhibition it was decidedly successful and a better hall than the Palais du Cinquantenaire for such a show could not be found. Plenty of room, no double tiers, and an excellent light enabled one to move about in comfort, and to examine the exhibits.

What strikes one greatly in motoring through Belgium is the great number of small holdings, and one would have thought that a large number of fowls would be seen on each, but this is not so, or at any rate they are not visable. There are of course certain breeding districts that supply the fowls to the fatteners, but the Belgian peasant seems to take no interest in his poultry beyond the question of lbs. of flesh. There are here and there a few better class fanciers, but these are nearly all dealers.

The great centre for the Malines fowl is the town from which they take their name. The great market day is on Saturday, but if one wants to see it, it is a case of getting up at 5 a.m. as I had to do. Thousands of Malines are brought in from the breeding districts on one side of Malines and bought up by the fatteners on the other side, one of the principal centres being Londerzeel. The poultry are almost exclusively Coucou de Malines; a few good ones here and there, but a majority very indifferent as regards plumage; all, however, are in good condition for fattening. It is a curious sight to see the fattener buying his birds; there is no time wasted; he takes a bird out of the seller's basket, just feels it, blows up its feathers, and if satisfactory throws it into his own basket, the operation taking about 5 seconds. The price paid by the fatteners would seem high to us in England.

The Poultry Market at Malines, Belgium, where an enormous trade is done in the sale of poultry and poultry produce. [Copyright.

The run of prices seemed to me to range from 5 frs., 7 frs., 10 frs., and up to 15 frs, Many of the largest cockerels were of great weight, the heaviest, no doubt, being the Turkey-headed variety. It must be remembered that although the Turkey-headed make the heaviest birds, they take much longer to mature than the single comb variety.

After the Coucous the Black Turkey-headed seemed the most numerous, and then the white variety. There were very few of the latter at the market I attended, and I was surprised to find that there were scarcely any of the other breeds on sale, such as Buff Orpingtons, Leghorns, &c. of which a considerable number has now been imported into Belgium. This shows that the Belgian peasant prefers his Malines breed to any other.

A favourite method of chicken rearing in Belgium. The straw houses are dry and warm, and afford ample protection to the chickens even on the roughest day. [Copyright.

One of the most up-to-date, largest, and by far the best managed poultry farms conducted on business principles is that of the Vicomte de Beughem at Lippeloo. An extensive description of this establishment was printed in the report on the Belgian Poultry Industry by Edward Brown, F.L.S., which should be in the hands of all breeders of Malines. In can be obtained from the publishing office of the Illustrated Poultry Record.

The establishment at Lippeloo rears some 10,000 chickens. The illustration shows the brooding house which is heated by pipes and also contains hovers. The cleanliness of this brooder house is wonderful and Mr. Feyaerts, the manager, told me that disease is unknown there. The youngsters are fed on buckwheat meal and sharps, and at 6 weeks old weigh about 3 lb.; they are then sold off to the fatteners who come and buy as many as there are to dispose of, giving 5 frs. apiece for them. Day old chickens are also sold off at 60 centimes apiece. No stock birds are kept at Lippeloo, the system being to supply the farmers round about with the breeding stock, and these contract to supply all the eggs laid at market price. This arrangement seems to work quite satisfactorily. There are 3 incubator rooms kept working all the year through, except the months of October and November. Each room contains 8 incubators each of 250 egg capacity. After each hatch the incubators are taken out of the rooms, disinfected, and the place freshly white-washed before being restarted. The brooder houses are also treated in the same manner.

The incubators are nearly all made on the estate, and on quite a different principle to our English ones. They are heated by pipes running round the sides of the egg tray without a tank of any description; while the top being glass a full view of the eggs can always be obtained. To our idea the want of heat over the eggs in the centre would be detrimental to their hatching, but this does not seem to be the case, as at the time of my visit the chickens could be seen hatching out well. Here is another problem for our incubator manufacturers to solve. I hope to try one of these incubators during this season and will publish the result.

EGG-LAYING IN NEW SOUTH WALES.

The Hawkesbury College Tests.

The tenth Annual Competition held at Hawkesbury College, New South Wales, has been completed and the records are highly interesting, more especially as some of the birds have been retained for three years. It is again a remarkable tribute to the White Leghorn, as this breed is pre-eminent in all the sections. Other interesting competitions are recorded below. The winners are as follows:

Third Year Hens: 1st, J. Waugh, White Leghorns; 1st year, 1,296 eggs, 2nd 984, 3rd 1083; grand total, 3,293; weight per dozen, 25 oz.; total value £16 18s. 8d., grand average, 548.83 eggs; average No. of eggs per annum, over three years, 182.94 eggs; grand values average, £2 16s. 5d.; average value per annum, 18s. 9¾d.

Second Year Hens: 1st, Hillcrest Farm, White Leghorns; 1st year, 1,262 eggs; second, 1,110; grand total, 2,372 eggs; weight per dozen, 25 oz.; total value £12 2s. 2d.; grand average, 395.33 eggs; average per annum, 197.66 eggs; grand values, average £2 os. 4d.; average value per annum, £1 os. 2d.

First Year Hens: 1st, Cowan Bros., White Leghorns; No. of eggs, 1,389; weight per dozen, 24½ oz.; value, £7 18s. 9d.; average, 231.5 eggs; average value £1 3s. 7½d.

Third Year Ducks: 1st, G. E. O. Craft, Indian Runners; 1st year, 1,034 eggs; 2nd 1,019; 3rd, 826; Total 2,897 eggs; weight per dozen, 34 oz.; total value £13 4s. 9d.; grand average, 482.83 eggs; average per annum, 160.94 eggs; grand values, average £2 4s. 1½d.; average value per annum 14s. 8½d.

Second Year Ducks: 1st, Mrs. B. Wakfer, Cautonese; 1st year, 1,030 eggs; 2nd, 985; total, 2,015 eggs; weight per dozen, 28 oz.; total value, £8 9s. 6d.; grand average, 335.83 eggs; average per annum, 167.93 eggs; grand values average, £1 8s. 3d.; average value per annum, 14s. 1½d.

First Year Ducks: 1st, J. P. de Beyer, Indian Runners; No. of eggs, 1,245; weight per dozen, 31½ oz.; vale £5 11s. 6d.; average, 207.5 eggs; average value 18s. 7d.

From the *Sydney Daily Telegraph*, which has taken an important share in these tests, we take the following results of the whole series:

THE FINANCIAL ASPECT.

The cost of feeding was based on the following contract prices for the stables:—Wheat 4s. 6d, maize 3s. 9d, and bran and pollard 1s. per bushel, livers 4s. per dozen, meat meal 7s. 6d. per cwt., shell grit 30s. per ton, green feed £2 per ton. The values of the eggs represent the prices realised in the Sydney market, less freight, commission, and charges. The total surplus over the cost of feed, on the 100 pens of hens was £343 1s. 5d, and on the 25 pens of ducks £27 12s. 9d. Grand total, £370 14s. 2d.

A Large Winter Chicken House on the Vicomte de Beughem's Poultry Farm. [Copyright.

THIRD-YEAR HENS.

Cost of feeding: Wheat, £6 3s.; maize, £3 15s.; bran and pollard, £5 5s.; meat, £1; shell grit, 10s.; green feed, £1 2s. 6d.; total, £17 15s. 6d.

Market value of eggs laid, £34 16s. 5d, leaving a profit of £17 0s. 11d.

SECOND-YEAR HENS.

Cost of feeding: Wheat £18 7s. 6d.; maize, £12 5s.; bran and pollard, £15; meat, £3 2s. 6d.; shell grit, £1 5s.; green feed, £3; total, £53 10s.

Market value of eggs, £155 12s. 6d, leaving a profit of £102 2s. 6d.

TENTH ANNUAL COMPETITION.

Cost of feed: Wheat, £31 10s.; maize, £21 5s. bran and pollard, £26 10s.; meat, £6 5s.; shell grit, £2 10s.; green feed, £4 10s.; total, £92

Market value of eggs, £276 18s. 7d, leaving a profit of £184 18s. 7d.

NO-MEAT TEST.

Cost of feeding: Wheat £6 5s.; maize, £4 3s. 6d; bran and pollard, £5 7s. 6d.; shell grit, 10s.; green feed, £1 5s.; total, £17 11s.

Market value of eggs laid, £56 10s. 5d, leaving a profit of £38 19s. 5d.

THIRD-YEAR DUCKS.

Cost of feeding: Bran and pollard, £10 5s.; meat meal, 14s.; shell grit, 15s.; green feed, 10s.; total, £12 4s.

Market value of eggs, £12 9s. 6d, leaving a profit of 5s. 6d.

SECOND-YEAR DUCKS.

Cost of feeding: Bran and pollard, £15 10s.; meat meal, £1 1s.; shell grit, £1 2s. 6d.; green feed, £1; total, £18 13s. 6d.

Market value of eggs, £20 12s. 9d, leaving a profit of £1 19s. 3d.

FIRST-YEAR DUCKS.

Cost of feeding: Bran and pollard, £37 10s.; meat meal, £2 15s.; shell grit, £3 5s.; green feed, £1 10s.; total, £45.

Market value of eggs, £70 8s., leaving a profit of £25 8s.

THIRD YEAR HENS.

	Eggs per hen.			Value per hen.		
	First year.	Second year.	Third year.	First year.	Second year.	Third year.
54 White Leghorns	209	148	134	25/6	13/3	11/11
6 Black Orpingtons	189	156	100	23/5½	15/2½	8/8
Average cost of feed per head	—	—	—	6/9	5/8	5/11

SECOND YEAR HENS.

	1st	2nd	3rd	4th	5th
Number of pens	40	50	40	40	30
Highest total, 2 years	2847	2634	2319	2369	2372
Highest total, 2nd year	1054	1150	1013	1045	1110
Average per hen, 1st year	180	179	190	194	184
Ditto, 2nd year	124	127	140	134	140
Profit over feed per hen, 1st year	11/2	10/11	11/4	16/9	10/2
Ditto, 2nd year	6/0½	5/4¾	9/8	5/8	8/3
Greatest value of eggs, two years	12/1/6	12/16/9	13/2/5	12/14/2	12/2/2

	Eggs per hen.		Value per hen.	
	1st yr.	2nd yr.	1st yr.	2nd yr.
102 White Leghorns	187	167	18/3	15/1
18 Langshans	176	136	17/2	13/7
6 Brown Leghorns	169	117	16/4	10/7
18 Silver Wyandottes	177	122	17/7	13/4
30 Black Orpingtons	159	104	15/1	9/7
6 White Orpingtons	128	112	12/5	11/4

TENTH ANNUAL COMPETITION.

	No. of pens.	Winning total.	Lowest total.	Highest monthly total.	Average per hen.	Greatest value.	Average price of eggs.	Average value per hen.	Feed per hen.	Profit over feed.
1st	38	1113	459	137	130	140/0	1/1	15/6	6/0	9/6
2nd	70	1308	666	160	163	150/0	1/3¾	17/9	5/9¾	12/0
3rd	100	1224	532	154	152	114/0	1/0	12/9	4/5½	8/3
4th	100	1411	635	168	166	125/0	/11½	13/3	5/3½	8/0
5th	100	1481	721	162	171	137/0	1/0½	14/10	5/10	9/0
6th	60	1474	665	161	173	149/0	1/2¼	17/2	7/0	10/2
7th	50	1379	656	159	180	146/0	1/3¼	19/2	7/9½	11/4
8th	60	1394	739	158	181	173/0	1/6½	21/9	6/9	15/0
9th	40	1321	658	151	168	134/5	1/2	16/3½	6/1½	10/2
10th	50	1389	687	146	184	141/9	1/2½	18/5½	6/1½	12/4

	Eggs per hen.	Value per hen.
6 Rose-comb White Leghorns	224	23/4½
192 S.C. White Leghorns	192	19/2
42 Black Orpingtons	187	18/11
18 Plymouth Rocks	162	16/5
30 Silver Wyandottes	157	16/1
6 Minorcas	150	14/0
6 Cuckoo Leghorns	115	9/11
300 Hens	184	18/5½

NO-MEAT v. MEAT-FEEDING TEST.

	No meat.	Meat fed.
Total eggs laid	11,112	11,665
Average per hen	185·2	194·4
Market value per hen	18/10	19/4
Cost of feed per hen	5/10	6/1½
Profit over feed per hen	13/0	13/2½

SECOND-YEAR DUCKS.

	1st.	2nd.
Number of pens	5	6
Highest total	2464	2015
Ditto second year	1244	985
Average per duck, first year	185·3	185
Ditto, second year	175·6	136
Profit over feed per duck, first year	10/7½	6/3
Ditto, second year	5/9½	/11½

FIRST-YEAR DUCKS.

	First comp.	Second comp.	Third comp.
Number of pens	25	20	15
Winning total	1235	1278	1245
Lowest total	507	835	714
Highest monthly total	177	166	180
Average eggs per duck	156 5	170·5	173
Greatest value	£6/14/5	£5/13/7	£5/11/6
Average price of eggs	1/3	1/0½	1/1
Average value per duck	16/6	14/10½	15/7½
Cost of feed, per duck	9/6	10/0	10/0
Profit of feed, per duck	7/0	4/10½	5/7½

The July and August issues of the "Illustrated Poultry Record" are International Numbers, and deal almost exclusively with International aspects of the poultry industry. Several of our regular features have therefore had to be suspended, but they will be resumed in the Sept. issue. (Editor I.P.R.)

DISEASES OF THE OVIDUCT.

By D. F. Laurie,

Poultry Expert to the South Australian Government.

[Mr. D. F. Laurie, the author of the following extremely interesting notes, is doing excellent work in connexion with the poultry industry in South Australia. The illustrations which we reproduce are evidences of his patience and his skill.]

It has been frequently impressed upon breeders that in recent times much light has been shed upon what were once obscure or little understood problems in breeding. Nowadays none but the illiterate deny the fact of heredity. A great many of the troubles that beset the poultry-breeder are due to want of knowledge of the laws of breeding, and, of course, of feeding and other matters.

Rupture of the Oviduct due to Impaction and Cessation of Function.—The laying hen, and particularly the pullet, or young hen, is, during her reproductive stages, in a more or less nervous condition. Her every function of life is practically concentrated upon the effort to reproduce her species, and she is in a different state as regards temperature, blood pressure, and nervous equilibrium from that which exists when she is not laying nor about to lay. The rule holds for all creation; various instincts are aroused, and the female, as a rule, seeks quiet and seclusion, and resents, and suffers from undue treatment and publicity. The hen, true to the survival of feral instinct, seeks out secret secluded spots wherein to make her nests, and will, if at liberty, revive many of the habits of her jungle ancestry. The laying hen, whether in the act, or while carrying and maturing eggs from day to day, is in a highly strung nervous condition. The act of laying is due to muscular contractions which depend upon nerve stimulus. Any sudden disturbance or the worry and excitement, due to change of locality, a journey, or any disturbing influence, as chasing by men and dogs, tend to derange the nervous system and may rob the muscles of the stimuli, without which they cannot act. On many occasions during operations, *post mortem* or otherwise, I discovered abnormal conditions which owed their origin in the first place to nervous derangements. Readers may remember that in the report of a former laying competition at the Roseworthy poultry station a description was given of a *post-mortem* examination of a hen which was proved never to have laid an egg during the greater part of the test. In this case examination showed that the oviduct was in a flaccid, non-functional condition. The ovary was also non-functional, and lacked the signs characteristic of having shed any ovules recently. In the abdominal cavity were found two complete eggs, the condition of the shells of which proved them to have been there for many months. The history of this hen showed that she was in a laying condition when sent from Adelaide to Roseworthy. The excitement of the journey and of her new surroundings evidently had the effect of inhibiting the peristalic muscular contractions of the oviduct while one of these eggs was passing through that organ. Later on another egg passed partly through, and was completely formed as regards membranes, shell, etc. The subsequent history, as surmised, was that the loss of function in the oviduct was complete, and as there was no

PLATE I.

Fig. 1. Fig. 2.

For description see article on this page.

trace of any rupture the eggs must have gradually worked their way back to the free end of the oviduct (*ostium*) and thus passed into the abdominal cavity. The oviduct ceased activity, doubtless in sympathy with and due to the cause operating on the oviduct.

Plate I., Figs I. and II.—This refers to a case somewhat similar in some respects, but in which there were many interesting features. I noticed that one of the Black Orpington second season hens in one of the breeding pens at the Roseworthy poultry station showed an abnormal abdominal development. She was what breeders call "down behind," but was red in comb and very healthy in general appearance. On a subsequent visit I killed

her, and made an autopsy. On laying bare the internal organs I was met with a surprising sight —she seemed to be full of eggs, many completely shelled. It was then recalled that at times she had been noticed passing fluid like egg white, which was sometimes coloured, and which would account for the remains of the many broken eggs found within her.

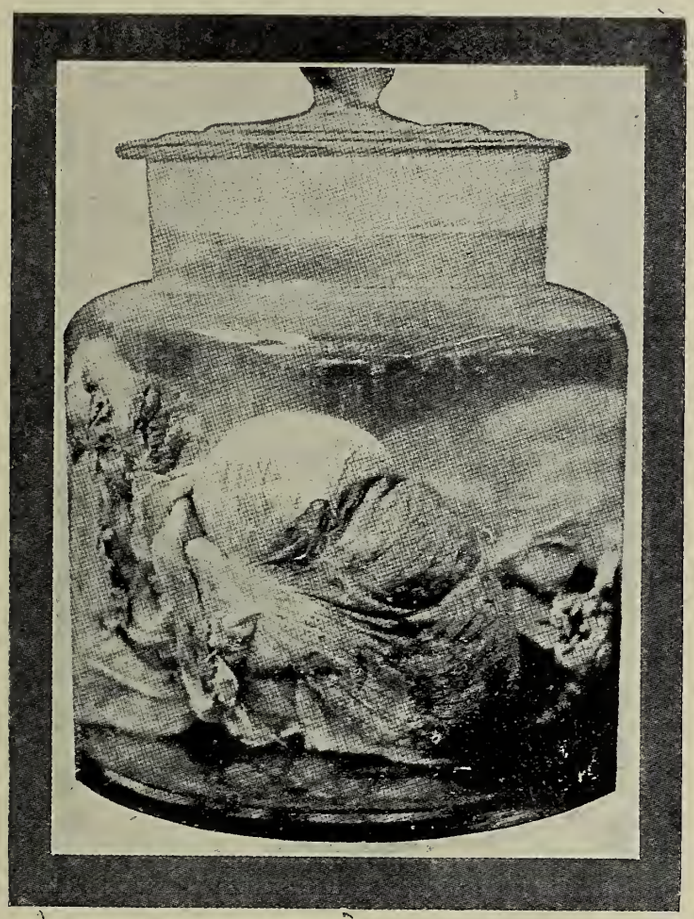


PLATE II.

PLATE I., FIG I.—Shows the oviduct suspended—it was 26in. long and functional except at the uterus portion, where a rupture was found; *a* shows the funnel shaped free end (*ostium tubæ abdominale*) of the oviduct resting on one of the encysted masses of broken shell (*bb*). This rupture was old, and new tissue had formed round the torn edges, thus making a new outlet, but into the abdominal cavity. In the uterus portion (where the shell glands are) and towards the closed end I found two encysted bodies (*b b*), which upon examination proved to be conglomerated masses of broken shells. The cause of this is obscure. In all probability the impaction was originally caused by a broken egg, but why so many should subsequently be broken and so form a mass is difficult to explain, unless the hen frequently passed over some object or obstruction which caused frequent breakages of eggs while in utero. The subsequent pressure of eggs on the oviduct caused the rupture. The encysted mass of shell is as big as an ordinary fist, and each must include the remains of six or more eggs.

PLATE I., FIG II.—This also refers to the same hen and shows the foreign contents of her abdominal cavity. There are six completely formed eggs with firm shell, tinted, five eggs with membranes, but lacking lime salts deposits (shell), and four other soft eggs, flattened in shape. The complete and soft-shelled eggs were all oviform and normal. The most surprising fact to my mind was that not only was there no sign of inflammation, nor of any septic symptoms, but that the ovary was in a healthy and most active condition, and maturing and shedding ovules which appeared normal and healthy. The excised ovary is shown at *c* and is seen to contain ovules in various stages of development. It is very evident that active resorption was in progress, but it is doubtful how long the hen could have existed without further troubles due to pressure.

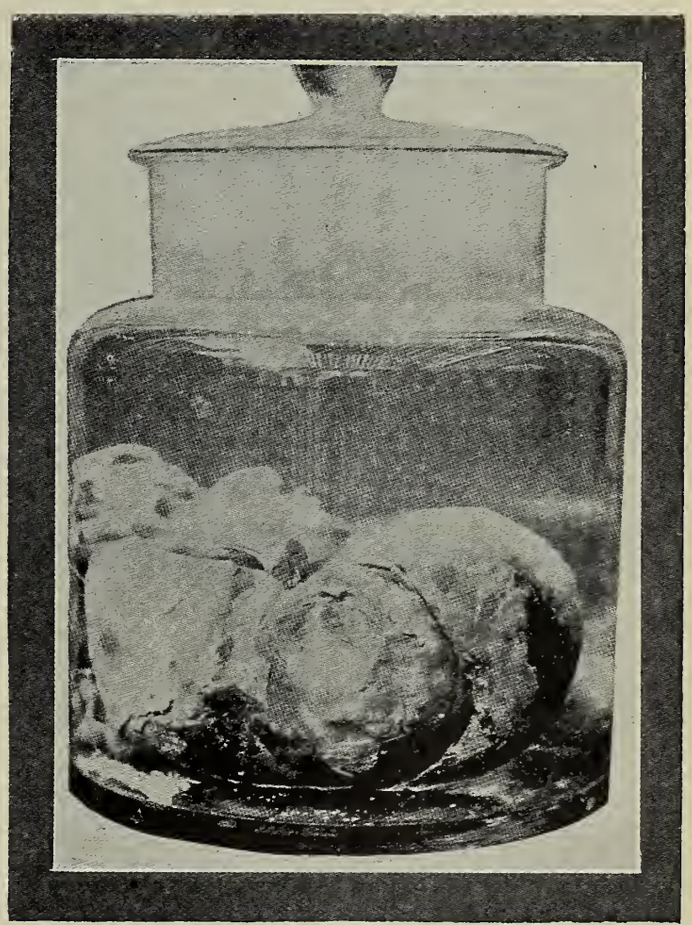


PLATE III.

PLATE II.—This shows viscera of a large hen which appeared to have a tumour of some sort. *Post-mortem* examination revealed the interesting fact that there were three completely formed eggs in the uterine portion of the oviduct, which is clearly shown, and the shape of the eggs can be seen. The duct was highly vascular and inflamma-

tion was setting in. Peristaltic action must have ceased and a state of impaction or obstruction was evident. No other abnormal features presented themselves. The ovary in this case was not active, and it is perhaps possible that these three eggs were the last of a series prior to a long period of rest.

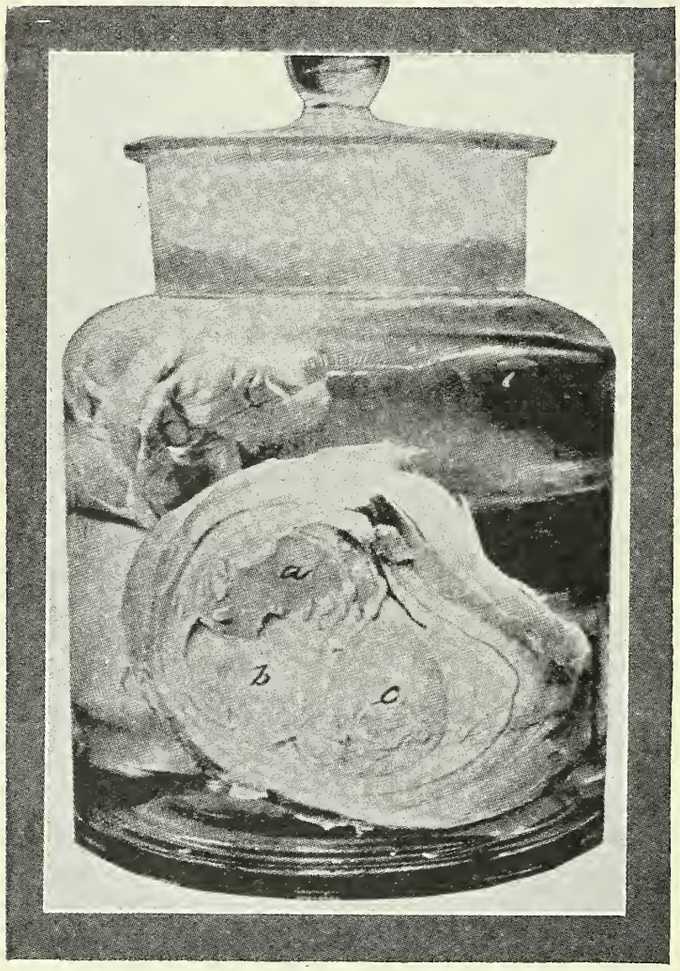


PLATE IV.

PLATE III.—Shows a mass consisting of three similar tumeroid masses severed from the oviduct of an old hen. In this case septic symptoms were present, and the hen was moribund when received. The plate shows discolouration, due very likely to the organisms of putrefaction or to enzyme action, causing chemical dissociation and consequent evidence of sulphur compounds, humins, etc. (*melanins*).

PLATE IV.—Shows a section through a tumour of similar constitution. Here, at *a*, *b*, and *c*, can be seen the shapes of three eggs, and round these individually, and round them as a whole, will be seen the laminated succession of deposits of albumen and membranes secreted by the oviduct. The partial resorption of this material and chemical changes result in an appearance similar to that of a hard-boiled egg. There was no effluvium, and the sulphur compounds of the proteins were not in process of decomposition as far as could be judged by smell and appearance. The hen from which this specimen was taken was old and the ovary not functional.

These plates deal with one abnormal case (I.) and with cases (II., III. and IV.) commonly met with in my work, but all primarily due to nervous shock in the first instance. The moral for breeders is to observe the following rules:—

1. Do not harass, worry, nor chase, nor let dogs and children chase, laying hens

2. Do not send such hens and pullets on a long journey if it can possibly be avoided.

3. Where heavy, inactive, short-legged hens are concerned do not have obstructions which may injure her.

The next article will describe the organs of reproduction in a hen, and the illustrations with explanation will deal with the obscure ovarian cystic formations so often seen.

A Case for an Old Age Pension.

"As we pause by the roadside a small brown bird springs out of the grass at our feet; it is a skylark. Stooping down, we see a little nest with three warm eggs in it. The sight inspirits us The same lark sat on the same eggs three thousand years ago, and the same lark will be sitting on the same eggs three thousand years hence."—*Mr. James Douglas in "The Daily News and Leader."*

Fattening in Canada.

Slowly but surely the fattening system is being adopted in Canada. The Saskatchewan Department of Agriculture has recently published a bulletin giving the results of experiments conducted in that state, showing the advantages secured. It is stated that although many of the birds fed were unsuitable "the quality of the flesh was so much superior to that of the ordinary bird offered to the trade, that wherever a sample case was sent to the dealer, the quality and appearance of the birds brought business."

The Day-old Chicken Trade.

It would appear that the day-old chick business is moving onwards in the Australian Colonies, and it is found equally satisfactory as in the home country, in spite of the greater distances which have to be travelled. The fact is, this branch of poultry keeping is only in the initial stages, for it is reasonable to anticipate that the time will come in nearly all countries when farmers will, as a matter of course, renew their stock in this manner. The Colonies have been slow to take it up, but with the great development of the poultry industry it is bound to increase rapidly.

FANCIERS AND FANCY MATTERS.

By William W. Broomhead.

The Poultry Club.

I see that the Poultry Club is getting into hot water again. An old fancier has given the council an open letter, and two or three others have been reminding it that it has left undone things it should have done. It is not for me to throw stones. I have been a member of the Poultry Club for some years now, and I daresay I know about as much of the inner working as does any one connected with it. I am not, therefore going into details here—or any where else for the matter of that. Nevertheless, the club does want something that will, to use a common enough expression, buck it up. It is just a little flat at present, and the fact that its membership is not increasing as it should do with the growth of the Fancy, is a sure sign, I think, that it has lost its grip. The re-distribution scheme of three or four years back gave it a good boom and sent its membership up with a bound; but for some reason or other the "follow up" has not been a good one. The club continues to hold its meetings in London, and with one solitary exception I believe, it has never gone into the provinces. One hears much of the northern element versus the southern, but small wonder that some fanciers say the club is a southern concern and troubling itself little about the doings of the northerners. Certainly, among the councillors, nowadays, there is provision for delegates from the different county branches; but not all delegates are county members, or even reside in the counties they represent. If the club is to be the power in the Fancy that such a body should be it must, as I say, move with the times.

International Standards.

Writing of the Poultry Club reminds me that the question of international standards has now taken tangible form, and a committee of enquiry has been set going, with Mr. William Rice as its hon. secretary. This committee consists of the Rev. T. W. Sturges, Rev. E. Lewis Jones, and Messrs. C. N. Goode, W. J. Golding, L. C. Verrey, J. Horn, and the aforesaid hon. secretary, and it has been appointed to collect information on the question of international standards. Mr. Rice does not mean to let the grass grow under his feet, and already he has bombarded the secretaries of specialist clubs and the Fancy Press with the matter. The committee is anxious to get, in one list, the main points of difference between the English and other standards; and it asks those who are interested to indicate briefly—not for publication, but for the information of the council—the several details in the standard of the breed represented by the various clubs. The clubs are asked to answer three questions, viz., (1) which are the *essential* points? (2) which might be modified (and in what direction), if the English standard was revised? (3) which may be regarded as *non-essential*; that is to say, which might form the basis of discussion with representatives of other countries when, and if, the question of international standards moves forward another stage? The ball has been set rolling in a fitting manner, but I have my doubts as to the length of its journey!

One Stumbling Block.

It is not for me to put boulders in the path; nevertheless, I cannot help thinking that one of the biggest stumbling blocks will be size, when it comes to arranging a level standard for England and America. The American fanciers, as a rule, cannot get size, simply because their climate is against it. Winter hatching for the show pen is practically unknown in the land of Stars and Stripes, and the fanciers out there do not commence their rearing operations until April or thereabout. Such is the nature of the summer, too, that the chickens cannot grow slowly—and they come to maturity ere they have developed any size. This, at any rate, is what I am told by an Englishman, who knows what he is talking about. And, "when you come to think of it," that is the case in a nutshell. I have seen several American-bred fowls of different breeds, Plymouth Rocks, Wyandottes, Rhode Island Reds, and Leghorns among them; but I must admit that, of the "heavy brigade" at least, I have never yet seen one possessing the bone and frame of the English birds. And then, reverting to the question of international standards, it may well be asked, is there any breed we have had from America that we have injured? Some may point to the Brahma, and others to the Leghorn. But these breeds are not of American origin. England is acknowledged to be the breeding centre of the world, no matter whether it be horses, cattle, sheep, or poultry, and as long as breeders in this country know the requirements and can give satisfaction what more is wanted? There are far greater difficulties in the formation of international standards than are apparent at a first glance. Certain of the English specialist clubs have already met and discussed the matter; but in many cases there appears to be a strong feeling not to give way in any point of importance. Someone told me the other day that the Langshan (modern, please) men are going to yield up a few points in length of leg—return to the original or Croad type. What! Any way, the International Standards Enquiry Committee of the Poultry Club is out for business, and its hon. secretary (Mr. William Rice), is the right man to keep things moving.

The Shows.

So far the summer shows have been very well patronised on the whole, and granted such weather as we had last year the events should put up some records. Among the chickens exhibited have been several particularly fine specimens, and genuine 1912 birds to boot, while of the old stock the majority have been in especially good fettle for the time of year. With the mild weather at the beginning of January, and the excellent results that were being obtained, it was anticipated that the chicken "crop" would be a good one. Nevertheless, I think it will be conceded on all sides that the young birds have exceeded expectations. I have handled many of the chickens at the important events, and I am very pleased to be able to say that the "ancient light" has been conspicuous by its absence. The season, it must be admitted, has been a most favourable one for the early birds, and seldom have the February chickens shown better development.

on the move in Scotland, and I trust that the much discussed Orpington Club for fanciers north of the borders will be formed this season. The "Red" men of Great Britain do not mean to rest on their oars. Secretary Scott is asking those breeders who are not already members of the British Rhode Island Red Club to join at once. The club year starts on August 1st, but anyone joining now will be given the privilege of membership until July 31st, 1913, without extra charge. The annual subscription is five shillings and there is no entrance fee. Those interested should write to Mr. George Scott (The Windmill, Pudsey, Yorks) for the club's circular which sets forth the numerous benefits to be derived from joining its ranks.

The Rev. T. W. Sturges's Poultry.

The Dean and Chapter of Christ Church, Oxford, having presented the Rev. T. W. Sturges—President of the Poultry Club—with the benefice of Brize Norton, Bampton, S.O., Oxford, that gentleman, in consequence of having to move from

Shelter from the summer's sun is equally important as from wind and rain of winter. Especially must white-plumaged birds be protected during the next few months. The bundle of gorse provides a capital way of giving the necessary shade.

Club Notes.

There was a good attendance of fanciers at the meeting of the Scottish Variety Bantam Club last month, and it was agreed to fall in with the proposal of the Scottish Game Bantam Club and hold a joint show in Glasgow, probably in November next. I am very pleased to find that the Fancy is

Marston Vicarage, Northwich, is giving up most of his poultry. Brize Norton is a charming village some fifteen miles from Oxford, and less than two hours by rail from London, and Mr. Sturges welcomes the move to the sunny south. He had established a rare poultry farm at Marston, a village on the Trent and Mersey Canal, two miles north-east of

Northwich and possessing extensive salt-mines and salt-works. When I was there early this season I saw some splendid fancy stock.

Birkenhead Show Dates.

I am pleased to see that Birkenhead Show is fixed for its old dates this year, since it is announced for September 11 and 12. The new secretary, Mr. H. C. Ardron (whose business address is 6, Hamilton Square, Birkenhead), has the poultry schedule now under preparation, and he will be pleased to hear from anyone anxious to guarantee classes, or to give specials at this important show. Since Mr. Ardron left Leicestershire — where for years he successfully engineered the annual events of the County Agricultural Society—to take up his duties in connection with the Wirral and Birkenhead Agricultural Society, he has gone into residence at "The Oaks," West Derby, Cheshire, where owing to lack of accommodation, he has had to curtail his poultry. He has, therefore, disposed of his Silver, White, and Blue Wyandottes, Plymouth Rocks, and Orpingtons, together with a good lot of chickens, so that the Columbian Wyandotte is the only variety he has retained. Mr. Ardron is a very keen poultry fancier, and it was long since that he "won his spurs" in the show arena, so now he has fined down his fancy to one variety, he should be even more successful than he was in the past.

July Events.

The summer shows are with us. June was a very busy month it must be admitted, but there will be no slackening off during the present, and already over forty poultry exhibitons are announced for July. The great "Royal" opens at Doncaster to-morrow (2nd inst), and closes on Saturday night. There will be a big show at Redruth, Cornwall on the 3rd and 4th, with no less than sixty-seven classes for poultry alone, and eight other events are already booked for the first event, the "Highland" opens at Cupar on the 9th, and remains open until the evening of the 12th; and I see that the Mid-Kent Agricultural Society will revive its annual show at Maidstone on the 10th., while Grimsby, Lincs and Prestwich and Lancs will also take place that week, From the 15th to the 20th there will be some over-lapping, since Blackpool is to be held on the 16th and 17th; Bolton, Lancs on the 17th; Newcastle-under-Lyme (the Stafford county event), Hove (the Sussex county show), and Waterford on the 17th and 18th; the Royal Northern at Aberdeen, and the Lincoln County at Skegness on the 18th and 19th; the Northumberland County at Tynemouth on the 19th; and Rochdale, Lancs., Laxfield, Suffolk, and Banks near Southport on the 20th. Oxted, Surrey, always a pleasant little outing, has fixed on the 23rd, while the great chicken show at Tunbridge Wells will take place on the 24th and 25th, Malpas, Cheshire and Upholland, Lancs, among other on the 24th, Todmorden, Lancs, and Dundee on the 27th, and Cornwood, Devon on the 31st. Readers should note that the "Royal Lancs" opens on August 1st at Preston.

HOW TO MAKE A PORTABLE POULTRY HOUSE.

Cost of Material.

	£	s.	d.
2½ squares ¾in. matchboarding at 12s. 6d.	1	8	2
80ft run of 2 by 2 deal at 4s. 6d. per 100ft	0	3	8
85ft. run of 2 by 1 deal at 4s. per 100ft.	0	3	6
11ft. run of 4½ by 3½ deal at 4½d. per ft.	0	4	2
Wire netting 1s., felt 2s. 6d.	0	3	6
Nails, staples, screws, hinges, nuts, bolts and washers	0	5	0
Wheels and fittings, ladder hooks, locks &c.	0	10	0
Paint for outside and limewash for interior	0	5	0
	3	3	0

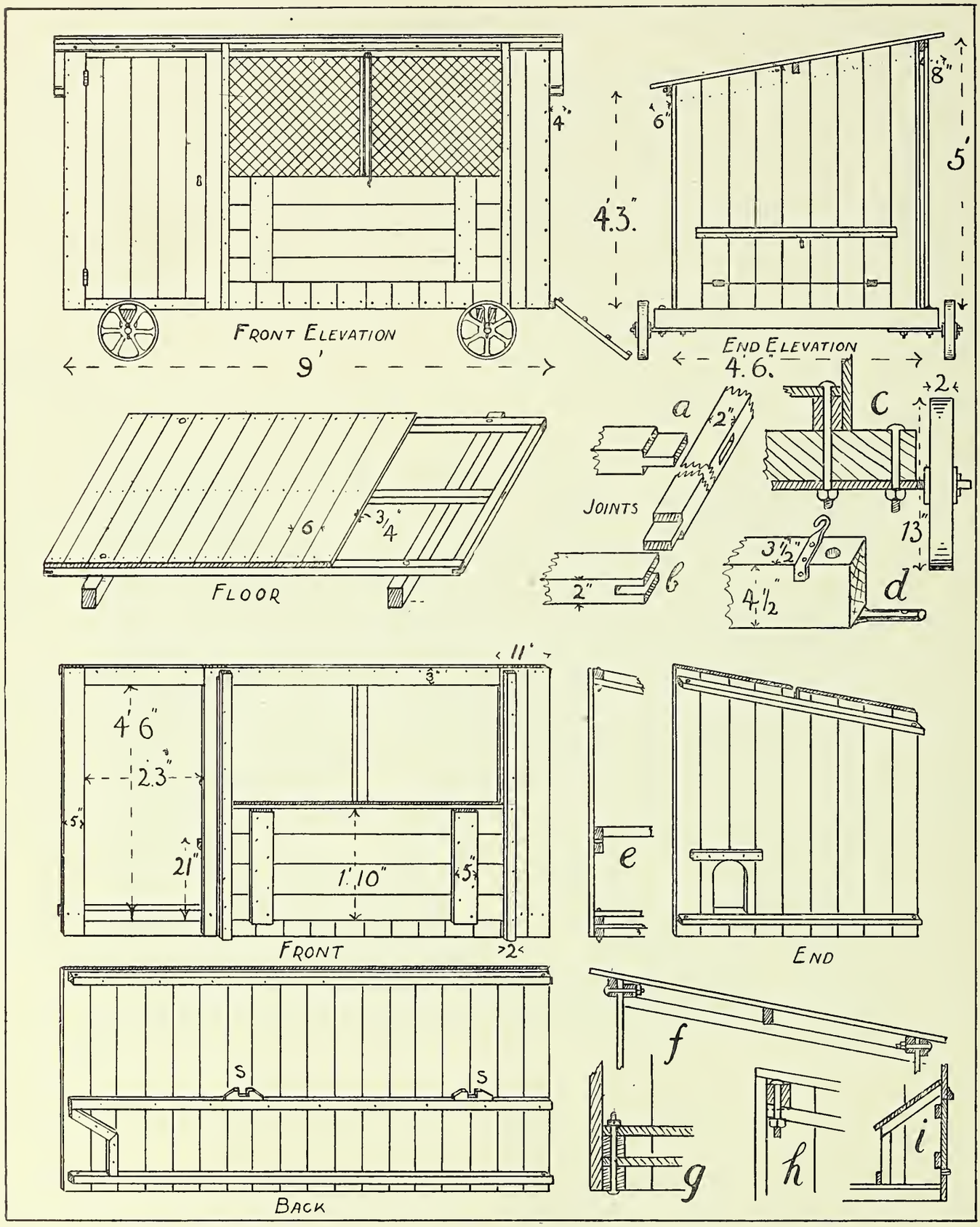
This portable house is built in six sections, as shown in the illustrations. The diagrams, to scale, show front and end elevation, floor, front, end, and back. (*a*) mortise and tenon joint; (*b*) angle bridle joint; (*c*) detail of wheel, showing method of bolting to bearers and house; (*d*) detail of end of axle; (*e*) section through front showing position of perches; (*f*) section through roof showing method of bolting to front and back; (*g*) detail of floor showing how the ends are bolted to floor; (*h*) detail of top, showing how end is secured to top; (*i*) nest-box, showing section with sloping board on top and hinged flap opening outwards.

The sections comprise front, fitted with door, open wired front with sliding shutter; two ends, one with outlet for fowls with ladder attached, the other fitted with flap for nest boxes; back nailed to lengths of 2 by 2; floor, supported on framework of 2 by 2 timber, and resting on stout wooden bearers; roof, nailed to three rails of 2 by 1. The whole supported on strong cast iron wheels, 13in. diameter, fitted with axles bolted to stout wooden supports.

Floor.—8ft. 10½in. by 4ft. 4½in., framed up with 2in. by 2in. stuff, joined at corners and end as shown at *b* and *a*. Covered with ¾ t. and g. boarding, flush with outside of frame.

Front.—This is fitted with door, 4ft. 6in. by 2ft. 3in., and sliding shutter, 5ft. 2in. by 1ft. 10in. Runners for shutter of 2in. by 1in. and 1in. by ¾in. stuff. Opening 5ft by 2ft. 3in., covered with wire. Two 8ft. 10½in lengths of 2in. by 2in. for top and bottom rails, and one 6ft. length for perch supports required, as well as four 5ft. lengths and ten 2ft.6in. lengths for matching, &c.

Ends.—These are nailed to lengths of 2in. by 1in. placed edgeways. Top rail to be 2in. down, bottom rail 4¾in. up. Opening for nest-boxes, 10in. deep and 3ft. 6in. long, 5¾in. up. Flap, opening outwards and hinged at lower edge, made of 10in. lengths, nailed to 2in. by 1in. battens. Bevelled rail over top to prevent water entering nests.



Plan of Portable Poultry House, showing every section as described on previous page. [Copyright

Outlet for fowls opposite end, 10in. by 2in., with round top; ladder 10in. by 1ft. 6in., hinged to short batten, and buttoned up flat when not in use.

Back.—9ft. by 4ft. 3in., nailed to rails of 2in. by 2in. One 8ft. 10½ft. rail of 2in by 1in. for perch supports; latter shown at "S" made of 3in. by 1in. (odd lengths being utilised).

Roof.—9ft. 8in. by 5ft. 10in., nailed to three 9ft. 8in. lengths of 2in. by 1in., and covered with felt placed lengthways. Roof bolted on front and back.

Wheels.—13in. by 2in., with strong wrought iron axles, bolted to wooden bearers of 4½in. by 3½in. stuff. Hooks, for trace, being made of ladder hooks, with end bent over and screwed to bearer.

Perches—of 2in. by 2in. stuff, rounded on top and fitted in sockets. Dropping boards fitted under.

Nest-Boxes—fitted in at door end and nailed to lengths of 2 by 1, covered with sloping board to prevent fowls roosting on top.

THE VALUE OF THE MIDDLEMAN.

Under our present conditions, and by the general methods of marketing, undoubtedly the services of the middleman cannot be easily dispensed with. He is the connecting link between the producer and the consumer, and until a more perfect system of direct communication between buyer and seller is attained this link must exist. There are many products that can wait for practically any length of time within reason, without losing either in quality or in price; as a matter of fact a rising market may be awaited. The owner of an article of commerce can pick and choose his customer, and select his own time of delivery and be quite independent of a middleman or intermediary.

With eggs, or any other perishable product, the case is entirely different, and if a speedy outlet is not secured direct, the middleman steps in and saves the situation. Of course, as in every other business, there are good and bad individuals; there are middlemen and middlemen; many of them deal in a most straightforward and honest manner, while others, in certain districts, having a monopoly, unscrupulously take full advantage of the fact that there are few competitors and thus offer ridiculous prices, which the unfortunate seller has no option but to accept. Such methods of dealing are, however, now few and far between; since poultry keeping is becoming such an important item on the farm that the disposal of eggs receives more attention, and the producer is not so easily beguiled into parting with his wares for whatever price the middleman cares to offer.

There are many districts in England where co-operative methods are adopted, and organised systems of collection are doing excellent work. There are also hundreds of poultry keepers who have a direct outlet by means of private trade, while there are others who take their eggs to the open market and dispose of them to retail customers. To such producers nothing further is necessary. It is in districts,—and they are very numerous,—where there is no system of organisation, and no combination among poultry keepers, many of whom are long distances from a railway station, or a market town, that the middleman renders inestimable service. Were it not for his intervention it is more than probable that the means of transport of eggs to market—and frequently back again—would be the village carrier. Were he to act as middleman by purchasing the eggs outright from the producer, and disposing of them to the best advantage to himself, he would very soon realise that to secure an advantage the eggs must be in the consumers' hands as soon as possible after they are laid, and while they still possess the bloom of freshness. Instead of adopting this plan, the carrier merely acts as carrier by taking the eggs to market, for which a small charge is made, whether they are sold or not. If the price were not as high as that at which he was instructed to sell them, he has no compunction about their return, since when they are eventually sold, their staleness casts no reflection upon himself. It is thus found that when the middleman goes his regular rounds, and collects the eggs directly from the producer it is mutually convenient for all concerned; the eggs are purchased, and paid for at once, a proceeding satisfactory to the poultry keepers, especially to those who depend upon their poultry to augment a slender income. Ready money in the direction of a rapid return for their produce is always welcome. Thus the poultry keeper is satisfied, and the much maligned middleman goes on his way rejoicing at the one egg or so per dozen that he has secured as his share of the transaction. It is often imagined that the middleman drives a hard bargain with poultry keepers who are badly in need of ready money, and who have no convenient mode of transport to market or customer. Undoubtedly the middleman does take a certain amount of toll for the long distance he may have to travel, but not to the extent that is usually supposed. We are not claiming for him any great virtue, or suggesting that he has qualms about offering low prices, but competition for the eggs is very keen indeed. Since during certain months of the year the demand is considerably in excess of the supply, the middleman does not have his own way entirely.

Goose Liver.

It is stated that the giving of antimony has the effect of producing big livers, the chemical being mixed with the food. An experiment is recorded in one of the German papers in order to test the practice, but on a small scale. It was found that whilst the condition of the birds was not affected, traces of antimony and arsensic could be found in the livers, which is promising for consumers of *pâté de foie gras.*

POULTRY COOKERY.

Chicken Pies and Puddings.

A Raised Pie : Take a large plump bird which has been carefully boned and cut it up into small neat pieces, and have ready at the same time some roughly chopped mushrooms, hard boiled eggs cut in quarters, and slices of prime streaky bacon cut in short lengths and rolled up tightly. Butter the inside of a square pie mould and line it out, first with greased paper, then with good short pastry rolled out about one-third of an inch thick, after which fill in with the chicken, mushrooms, bacon and eggs ; season the items pleasantly with salt, pepper, and finely minced parsley, and pack them in firmly, but not too closely, until the pie is quite full. Wet the edges of the pastry and cover with a lid of the same, then ornament the top tastefully with the odd pieces rolled out very thin and stamped out in small leaves with a suitable cutter. Brush the surface over very lightly with a small paste brush dipped in cold water, and make a tiny hole in the centre, then bake in a moderate oven from an hour and a half to two hours. During the process of baking keep the top of the pie covered with well greased paper, as the crust when finished, should be just a pale fawn colour. When done enough, fill up the pie, through the hole in the top, with good gravy made from the bones and trimmings of the bird, and mixed with a small quantity of French sheet gelatine, and allow it to remain in the mould until quite cold. When required, place the pie on a dish covered with a fancy dish paper, garnish freely with sprigs of fresh parsley and roughly chopped aspic jelly, and serve.

Chicken Pie, hot : Cut up two medium sized plump chickens into small neat joints, and put all the odd trimmings into a stewpan with a little salt, pepper, and nutmeg, a bunch of savoury herbs, a small piece of fresh lemon rind and an onion stuck with three or four cloves ; cover with cold water, bring to the boil quite slowly, then simmer steadily for an hour. Line the edges of a pie dish with well-made suitable pastry, and after that arrange a layer of chicken at the bottom ; next add a few small slices of prime ham or bacon, then some forcemeat balls, and hard-boiled eggs cut in quarters, and repeat in this order until the dish is sufficiently filled. Pour over the whole about half a pint of cold water, or stock, and cover with a lid of pastry ; press the edges firmly together, brush the top over with milk, or beaten egg, make a small hole in the centre, and bake in a well heated oven until, when pierced with a knitting needle or fine skewer, the meat feels quite tender. When half cooked, cover the surface of the pie with well greased paper to prevent its becoming too darkly coloured. Strain the liquor in which the bones, etc. have been simmered and pour carefully into the pie through the hole in the lid ; or, if preferred, thicken it slightly, colour it with a few drops of browning, re-boil it, and serve separately in a tureen or gravy boat. Place the pie when ready on a dish paper or neatly folded napkin, garnish with a full close border of fresh parsley, and send to table bubbling hot.

Small Chicken Pies : Put into a stewpan six ounces of cold cooked chicken which has been finely chopped, three ounces of cooked ham also finely chopped, two ounces of fresh butter well kneaded with an ounce of flour, a seasoning of salt, pepper, and grated nutmeg, a dessert-spoonful of strained lemon juice and half a pint of good white stock. Stir these constantly over a moderate heat until thoroughly blended, then turn out the preparation to cool. Line out some tiny pie moulds, or deep patty tins, with a light, moderately rich crust, fill them with the chicken mince, cover with lids of the pastry, brush over with beaten egg, make a small hole in the centre of each, and bake in a

[Copyright.

There is an impression that the only large duck farms in this country are in Buckinghamshire and Bedfordshire. The photograph above, however, taken on Mr. Walsh's farm in Lancashire, probably the largest in England, proves such an impression to be erroneous.

brisk oven. When done enough, carefully remove the pies from the mould, or tins, and serve either hot or cold, neatly arranged on a dish paper, and tastefully garnished with fresh parsley.

Chicken Pudding: Prepare the chicken and all the other items in exactly the same manner as directed for Chicken Pie, and make the crust as follows: Chop eight ounces of prime beef suet very finely, then put it into a bowl with twelve ounces of flour, one teaspoonful of baking powder, and half a tea-spoonful of salt. Mix well, and form into a paste with cold water, then roll out to the required thickness, being careful to handle the paste as little and as lightly as possible during the process. Grease the pudding basin very liberally, then line it out with the pastry, and fill in with the chicken, etc.; moisten with a little good stock or gravy, cover with a lid of the pastry, wet the edges and press them firmly together, then tie a strong pudding cloth over and fasten securely. Plunge the pudding into plenty of fast-boiling water and boil steadily from three to four hours according to size. More boiling water must be added when necessary in order to keep up the original quantity. When done enough carefully remove the cloth, and pin a neatly folded napkin very securely round the basin; place the latter on a hot dish covered with a fancy dish paper garnish with a ring of fresh parsley, and serve as hot, and as quickly as possible, accompanied by some creamy well-flavoured brown gravy in a hot tureen.

BOOTED BANTAMS.

In connexion with some notes I contributed to the "*Record*," on the bantam section of this year's Brussels Show, it is worth remarking that in Germany the Millefleurs are known as the "Parzellan farbige" or Porcelaine coloured, the latter name also being applied to the Jubilee Orpington in Germany. From an interesting article in the "*Geflügel Börse*" it appears that German breeders claim the honour of having originated the charming variety of Booted Bantams known as the Millefleurs, and it is thought that they originated from a golden spangled variety, the white spots being really a sign of degeneracy or lack of pigment, as is not infrequently noticed in the Golden Spangled Hamburgh of to-day. The late president of the German Poultry Club, H. du Roi, was an ardent fancier of Booted bantams, keeping, besides the Millefleurs or "Parzellan farbige," a chequered variety and some very pretty White-spangled Blues, originated by him as early as 1880. As I pointed out in my notes of Brussels Show, this latter variety is known to French and Belgian breeders as the Porcelaine, and I was told that a well-known French bantam breeder produced it. I see that the German Booted bantam fanciers have now formed a club of their own, and from all accounts it is going strong. A standard has been issued, and particular stress is laid on "hard feathering," the distinguishing feature of the breed compared with the Cochin bantam. W.W.B.

THE ORCHARD AND THE CHICKEN. [Copyright.

The value of an orchard as a poultry run is but insufficiently understood. The above illustration is reproduced from a photograph we recently took in Worcestershire, showing how the fowls obtain welcome shade from the heat of the sun, while the trees derive great benefit by reason of the manure.

TABLE OF PRICES REALISED FOR HOME, COLONIAL, AND FOREIGN POULTRY, GAME, AND EGGS FOR THE FOUR WEEKS ENDING JUNE 15, 1912.

ENGLISH POULTRY—LONDON MARKETS.

Description.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Each	Each.	Each.	Each.
Surrey Chickens ...	4/0 to 5/0	2/9 to 4/6	4/0 to 4/6	4/0 to 4/6
Sussex ,, ...	4/0 ,, 5/5	2/9 ,, 4/6	4/0 ,, 4/6	4/0 ,, 4/6
Yorkshire ,, ...	2/6 ,, 2/6	2/0 ,, 3/0	2/6 ,, 3/6	2/3 ,, 3/0
Essex ,, ...	2/6 ,, 3/6	2/0 ,, 3/0	2/6 ,, 3/6	2/3 ,, 3/0
Capons	4/6 ,, 5/6	5/0 ,, 6/6	5/0 ,, 6/6	4/6 ,, 6/6
Irish Chickens	2/6 ,, 3/6	1/9 ,, 3/0	2/0 ,, 3/0	2/0 ,, 2/6
Live Hens.....	2/0 ,, 2/6	1/9 ,, 2/6	1/9 ,, 2/6	1/6 ,, 2/0
Aylesbury Ducklings	3/6 ,, 4/6	3/6 ,, 4/6	4/0 ,, 5/0	3/6 ,, 4/0
Guinea Fowls	2/6 ,, 3/-	2/6 ,, 3/0	2/6 ,, 3/0	2/3 ,, 2/9
Goslings	5/0 ,, 6/6	5/0 ,, 6/0	6/0 ,, 7/0	5/0 ,, 6/6
Poussins	1/6 ,, 1/9	1/0 ,, 1/6	1/0 ,, 1/6	1/0 ,, 1/6
Turkeys..... per lb.	— —	0/5 ,, 0/8	— —	— —

ENGLISH GAME—LONDON MARKETS.

Description.	Each.	Each.	Each.	Each.
Grouse	— —	— —	— —	— —
Partridges.....	— —	— —	— —	— —
Pheasants...	— —	— —	— —	— —
Black Game.....	1/6 ,, 2/0	— —	— —	— —
Hares.....	— —	— —	— —	— —
Rabbits, Tame.....	1/0 ,, 1/3	1/0 ,, 2/0	1/0 ,, 1/9	1/0 ,, 1/6
,, Wild	— —	— —	— —	— —
Pigeons, Tame.....	— —	— —	— —	— —
,, Wild	— —	— —	— —	— —
Wild Duck	1/6 ,, 2/0	1/6 ,, 2/0	— —	— —
Ptarmigan	1/3	— —	— —	— —
Hazels	— —	— —	— —	— —
Plover	— —	— —	— —	— —

ENGLISH EGGS (Guaranteed New-Laid).

Markets.	Per 120.	Per 120.	Per 120.	Per 120.
LONDON	8/3 to 9/0	8/6 to 10/-	5/- to 10/-	8/6 to 10/-
Provinces.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.
CARLISLE	0/9	0/9	0/9½	0/9½
BRISTOL	0/11	0/11	0/11	0/10½

FOREIGN POULTRY—LONDON MARKETS.

Countries of Origin.	Prices Realized during the Month.									
	Chickens. Each.		Ducks. Each.		Ducklings. Each.		Geese. Per lb.		Turkeys. Per lb.	
Russia	—	—	—	—	—	—	—	—	—	—
Belgium	—	—	—	—	—	—	—	—	—	—
France.....	—	—	—	-	—	—	—	—	—	—
United States of America ...	—	—	—	—	—	—	—	—	—	—
Austria	—	—	—	—	—	—	—	—	—	—
Canada	—	—	—	—	—	—	—	—	—	—
Australia.....	—	—	—	—	—	—	—	—	—	—

FOREIGN GAME. London Markets.

	Price Each During Month.
Capercailzie	— —
Black Game	— —
Ptarmigan	— —
Partridges	1/6 to 1/9
Quail	0/9 ,, 1/6
Bordeaux Pigeons	1/3 ,, 1/6
Hares	— —
Rabbits	0/7 ,, 0/9
Snipe	— —

IMPORTS OF POULTRY AND GAME. Month ending May 31st, 1912.

Countries of Origin.	Declared Values.	
	Game.	Poultry.
Russia	£65	£16,087
France	—	£2,871
Austria-Hungary	—	—
United States of America	—	£16,266
Other Countries.....	£369	£2,070
Totals.....	£434	£37,294

IRISH EGGS.

Description.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Per 120.	Per 120.	Per 120.	Per 120.
Irish Eggs	8/0 to 8/6	8/0 to 8/6	8/0 to 8/6	8/0 to 8/6

FOREIGN EGGS.

Description.	1st Week.	2nd Week	3rd Week.	4th Week.
	Per 120.	Per 120.	Per 120.	Per 120.
French ...	8/0 to 8/9	8/0 to 8/9	8/0 to 9/0	8/0 to 9/0
Danish ...	8/3 ,, 9/3	8/3 ,, 9/6	8/0 ,, 9/3	8/0 ,, 9/3
Italian ...	8/0 ,, 9/3	8/3 ,, 9/6	7/9 ,, 8/6	7/9 ,, 8/6
Austrian .	6/6 ,, 7/3	6/9 ,, 7/3	6/6 ,, 7/3	6/6 ,, 7/3
Russian...	6/3 ,, 7/3	6/3 ,, 7/3	6/6 ,, 7/6	6/6 ,, 7/6

IMPORTS OF EGGS. Month Ending May 31, 1912.

Countries of Origin.	Quantities in Gt. Hund.	Declared Values.
Russia.....	967,707	£341,202
Denmark	235,036	£104,680
Germany	65,290	£25,402
Netherlands ...	100,856	£43,753
France	95,296	£39,235
Italy.....	90,850	£37,250
Aust.-Hungary	59,813	£23,178
Other countries	58,338	£21,695
Totals	1,673,176	£635,395

THE ROTATION OF PRODUCTION.

(JULY)

By J. W. Hurst.

Fowls.

There has been a beneficial change in the weather conditions since I wrote the notes for last month, and in many directions improvement is noticeable in the stock, but particularly in the case of growing chickens which have made considerable progress since more frequent showers have improved the food supply and freshened things generally. There has been much more inducement for the birds, young and old, to forage far afield getting exercise with their food and reducing the cost of production generally. The work of selection and rejection must now be strenuously carried on, and not put off because the conditions may be better—the great majority of poultry keepers have none too much space, and no one can afford to retain the unfit. Directly haying is over advantage should be taken of the fresh ground then rendered available. There are many evidences of the beginning of the moult, and as it is desirable to get the process over without delay it must be encouraged, feeding the birds well and judiciously—remembering that it does not pay to neglect moulting fowls. On the other hand, it is seldom wise to do much in the way of forcing a moult, especially when egg production has not naturally ceased. A normal moult is in every way preferable, and good management can do much to induce this without any undue hastening. Pullets that are being reared for future laying must be kept on the move and their feeding regulated according to their stage of development, with a view to the prevention of precocity. The egg production of immature birds is most undesirable, both as regards the character of the produce and the effect of such early laying upon the usefulness of the birds. In spells of hot or wet weather, to either of which we may be subject, the birds should have an opportunity of getting shelter.

Ducks.

Animal food should be very carefully regulated in feeding when foraging opportunities are good, and in the case of the young it should be remembered that a frequent result of highly concentrated feeding is the development of leg weakness. When this occurs the birds should be fed on a diet that includes a good proportion of bran, green food, with some cooked meat, and a regular supply of grit. But leg weakness of this description must not be confused with rheumatic troubles—to which ducks are liable unless properly housed and cared for—or with the lameness that sometimes indicates the presence of liver disease. Where duckling production is continued at this season very little brooding is required, and one hen will be sufficient to take charge of a large batch of youngsters; but if the weather turns wet during the early days of rearing the young birds must be confined in dry quarters.

Geese.

Goslings have progressed remarkably since the rain has induced a greater growth of herbage, because not unnaturally these birds are seldom put on the best pasture and during a dry season their range is apt to become more or less bare and the grass relatively poor in quality. When this is the case it entails an addition to the cost of feeding, otherwise the birds hang in growth and development and more is lost than gained by parsimonious treatment. Consequently the rain has improved things for these birds, and has concurrently effected a considerable saving on the food bill. The old stock birds are now in many cases in full moult, requiring generous feeding and free access to swimming water. Where geese show a desire to sit it would generally be advisable to let them have the desired rest, but it is a doubtful policy to sit them on real eggs so late in the season—unless there is a particular object to be served, and the eggs are believed to be sufficiently reliable.

Turkeys.

There has been more anxiety concerning the welfare of these birds during the last few weeks than earlier in the rearing season, and the necessity for sheltering has been frequent. But with care in this matter, and suitable feeding, little harm has resulted from the altered weather conditions, and those whose birds are sufficiently forward—as many are—need now have little fear for the future provided they treat the birds properly. There have, however, been some recent cases of the dread disease "Blackhead" that have been brought to my notice. When an outbreak of disease takes place, steps should at once be taken to separate the healthy from the unhealthy, and to thoroughly disinfect all the quarters—with special cleaning and resting of all tainted ground. In any case it is advisable now to get all the young birds off the rearing ground on to fresh soil, and as far as possible to keep on the move on a good range.

An Attractive Publication.

It is only two years ago since *The Smallholder* was established, but its progress has been very rapid indeed, until to-day it is the most important weekly dealing with the lighter branches of agriculture. It is bright, well-written, well-illustrated, and full of useful information. It numbers among its contributors some of the best known agricultural writers of the present day, men who know what they are writing about.

The objects for which the paper was established were to promote and foster co-operative, scientific small husbandry; to solve agricultural problems; to establish co-operative small-holder colonies; to make Great Britain a self-feeding nation. The objects have, during the two years of its existence, been kept well to the fore, and we congratulate the editor upon his paper and upon the success which has so far crowned his efforts.

INTERNATIONAL STANDARDS.

Sir,—As your readers may have noticed, I have asked the various specialist clubs, and other interested folks, to give me in brief their ideas on the essential points of the standards of perfection of the breeds they are specially interested in. All such communications—and I have a large bundle now—are being treated as confidential. But one letter, sent to me recently, appears to grasp my needs so well that I have obtained permission to make it public.

WILLIAM RICE,
Hon. Sec. International Standards Committee.

Rettendon Common, Essex.

"Dear Mr. Rice,—In reply to your letter in the papers, are you only asking the opinion of secretaries of the various clubs? I was wondering whether, as the matter affects me seriously as regards my export trade, I might suggest some points in Orpingtons we can afford to give to meet the American standard, and those which if we can hold will secure our trade.

"The essential points, it seems to me, England should stand out for are SIZE, FULLNESS OF CHEST, and good DEPTH OF BODY. The points we may easily give a little in with benefit to ourselves are CUSHION, LOOSENESS OF FEATHER, and SIZE OF COMB.

"As regards the division of points in the Orpington standard, we cannot too strongly stand out for the type first as the fundamental basis of every breed; but I think America would give up its qualifications if we gave more to 'condition,' and I think when the day has come that we give an award to a bird dying in the pen, and which has had to be nursed for weeks before to keep it alive at all, it is time to consider the point as to whether BREEDING VALUE should not be taken into consideration under the head of 'condition.'

"As regards colour in buffs, to choice of leading English and American breeders met on a common ground last year, but it has always struck me as curious that a wide range of shades of buff one sees in the show pens at our leading shows in England, sometimes, too, even in those in 'the money.'

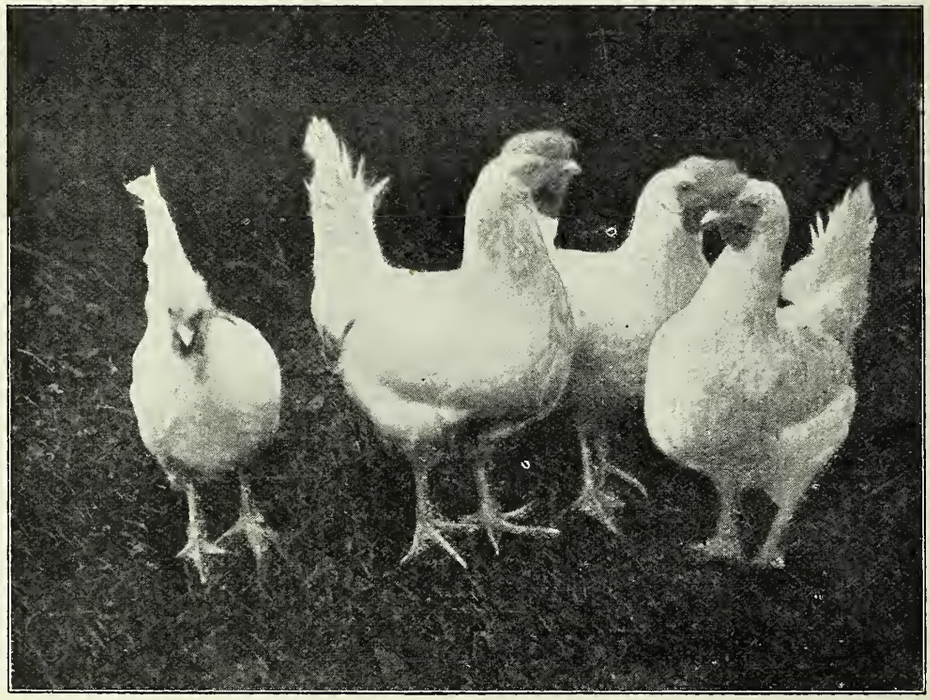
"If exact shades of colour in this and other varieties could somehow be more definitely fixed, it would be a great assistance to the novice, who often ruins his sales for lack of accurate knowledge of the correct shade of colour to breed for.

"Yours truly,
". . . . . ."

THE WINTER EGG.

"The need of systematic and determined attention to increase our winter egg supply is more and more pressing, and the fringe of this question has only just been touched." (Hon. Secretary National Poultry Organisation Society.) In view of this serious position of affairs a lady contributor has been constrained to send to the *Manchester Courier* the following lines:

The day dawns darkly! I am rather late:
Remove that horrid bacon from my plate.
Alas, alas! that eggs should be so few.



The winners of the recent Laying Competition. These four hens laid 324 eggs in 16 weeks, constituting a world's record. Bred by and the property of E. Cam, Hoghton, Preston.

Take hence the haddock in its heated dish,
Who—being eggless—cheers his soul with fish?
Alas, alas! that eggs should be so few.

Cold grow those kidneys 'neath my nose in vain,
Only an omelette could assuage my pain.
Alas, alas! that eggs should be so few.

Your proffered dole of eggless kedgeree
Arouses merely bored contempt in me.
Alas, alas! that eggs should be so few.

Art thou offended, erstwhile bounteous hen,
That now withhold'st thy gracious gifts from men,
Oh! happy days when eggs were not so few.

We beg thee, raise our all-too-short supply,
Or if thou wilt not, prithee, tell us why,
Alas, alas! that eggs should be so few.

Ask half our kingdom: it is thine to-day,
If only thou wilt condescend to lay,
And end the time when eggs are all too few.